

Program Evaluation of Post-Deployment Health Assessment (PDHA)  
and Reassessment (PDHRA) Processes  
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14. ABSTRACT <b>Vanderbilt's study used de-identified Service member (SM) PDHA and PDHRA responses and Military Health System contacts; anonymous SM surveys; analysis of de-identified assessment recordings; and assessment site observations and interviews with key unit and program administrators. Key findings included the PDHRA was associated with increased medical contacts regardless of referral status; SM responses on the assessment were the primary factor in clinician queries and referral decisions; clinician documentation and referral decisions were less consistent than SM responses; assessments conducted telephonically led to similar findings as those conducted face-to-face regarding clinician concerns, but resulted in fewer referrals; factors in the context of the assessment were associated with SM openness; clinicians could benefit from PDHRA-specific training; educational resources were valued by the SM but not commonly provided; and the additional questions about alcohol use did not provide added value. Recommendations were provided.</b>					
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## **Executive Summary**

### **Purpose of the evaluation**

Vanderbilt University (VU) completed a 26 month evaluation of the Department of Defense (DoD) health risk appraisal system for Service Members (SMs) returning from deployment. The evaluation was congressionally mandated and funded by Global War on Terrorism (GWOT) dollars through a contract with Force Health Protection and Readiness (FHP&R). The health risk appraisal system includes the post-deployment health assessment (PDHA), which is scheduled to occur within 30 days before or after redeployment (returning from deployment abroad), and the post-deployment health reassessment (PDHRA), which is scheduled to occur 90-180 days post-deployment.

Item content and clinical procedures for administering the PDHA and PDHRA are closely parallel. Each entails multi-stage processes requiring SMs to complete a structured inventory of physical and emotional symptoms, experiences with several aspects of combat (PDHA only), and exposure to several environmental and chemical agents while deployed. Following the self-report, the SM is individually evaluated by a clinician and is offered educational and informational materials relevant to his or her concerns. Clinicians also make referrals for further evaluation and follow-up treatment on the basis of clinical judgment.

The primary intent of this program evaluation is to assess how the PDHA and PDHRA contribute to increasing SM access to appropriate care, specifically, referrals for further evaluation. The key components of the evaluation included: (1) an SM survey and a quasi-experimental study to examine the effects of education about redeployment on SM reporting of problems and attitudes toward the PDHRA process; (2) observations and semi-structured interviews with 100 key personnel involved in the PDHRA process at 14 different installations; (3) content analysis of 272 de-identified audio recordings of telephonic PDHRA clinician interviews and (4) a secondary analysis of de-identified PDHA (n=298,650), PDHRA (n=251,089), and health service utilization records (n=21,166,398; each encounter is one record) dated between January 1, 2006 and March 31, 2009.

The secondary analysis of record data conducted for this evaluation includes the entire population of SMs who completed PDHRAs from January 1, 2006 through March 15, 2009. Thus, the results from these analyses are representative of the population of SMs whose records were on file at DoD at the time the data were retrieved for this study. In analyses where a specific sub-sample of the population was used this is clearly stated. In these cases the sample is no longer representative, and thus the results may not be generalizable to all SMs. All other components of this evaluation, including items 1-3, above, were based on a convenience sample of the population, and thus the results are not generalizable and should not be considered representative of the larger population from which the sample was taken. While sampling does limit the generalizability of some of our findings, wherever possible we took care to compare the smaller sample to the population and describe any differences.

One critical missing aspect of the current evaluation that is beyond the scope of work is examination of any data past PDHRA referrals (aside from the occurrence of any health care encounters within six weeks following the PDHRA). While it is logical to use referrals as an endpoint for an evaluation of the PDHRA process, this evaluation is not able to truly assess the appropriateness of referrals or the effectiveness of the health care encounter that may have followed the referral. One small scale attempt was made in the present study to examine appropriateness from the SM and referred to health provider perspectives but that attempt was not successful. The true impact of the PHDRA will not be known unless we know if the referral for further evaluation led to a successful health outcome for the SM. Increasing referrals when we do not know if they were to appropriate health providers who can subsequently successfully treat the health problem may only lead to increased cost without increased benefit.

### **Previous Research Findings and Issues**

The review of the literature identified important barriers to reporting and seeking treatment for physical and behavioral health problems, the effectiveness of different approaches to health risk appraisal, and the necessity of evaluating processes like the PDHA and PDHRA. Previous researchers have examined the PDHRA as a measurement instrument (i.e. psychometric studies), but no study has addressed how process factors influence the outcome of the PDHRA, a major goal of the current evaluation. Previous studies of post-deployment health have examined the relationship between rates of self-reported symptoms and health care utilization (Hoge, Auchterlonie, & Milliken, 2006; Milliken, Auchterlonie, & Hoge, 2007), perceived barriers to seeking mental health care (Hoge et al., 2004), and have provided validation of screening items included on the PDHRA (Bliese, Wright, Adler, & Thomas, 2004a; Bliese, Wright, Adler, Thomas, & Hoge, 2004; Bliese, Wright, Adler, Hoge, & Prayner, 2005). However, no previous study has evaluated the PDHRA process itself, nor sought to understand how each part of the process influences the overall outcomes for SMs. In addition, this evaluation is unique because it includes the administration of a SM survey linked to the PDHRA, semi-structured interviews with key individuals involved in implementing PDHRA events, and the analysis of actual PDHRA clinical interviews. Finally, all previous studies except one (Tanielian & Jaycox, 2008) have focused on select military Branches/components; this evaluation includes all Branches and components of the military.

### ***Major Findings***

#### **The PDHRA increases access to health care, especially for SMs who report symptoms on the PDHRA in multiple areas**

Overall, the PDHRA process works -- SMs who are in need of health care get access to additional health care. SMs who endorse more problem areas (e.g., physical, exposure, PTSD, depression, etc.) were more likely to receive medical referrals, and more of them. The count of SM problems explains a substantial 20% of the variance in the count of medical referrals ( $R^2=0.20$ ). SMs receiving medical referrals on average endorsed over four problem areas, while those receiving no referral endorsed less than three areas on average; these differences were not due to SMs already being under care. Thus, SMs with more problems were more likely to receive medical referrals. Further, there is a moderate to large positive correlation ( $r=0.48$ ) between the total number of SM reported problems and the number of medical referrals. Thus, SMs with more problems receive more medical referrals.

The PDHRA was also associated with SMs receiving more health care. Health care encounters (HCE) for Active Duty SMs, regardless of whether they received a referral or not, increased 50% after the PDHRA (from an average of one HCE during the six weeks prior to 1.5 HCEs within the six weeks after the PDHRA). Moreover, SMs who received a medical referral during the PDHRA were more likely to have a HCE than SMs who did not (70% and 46%, respectively). It was also found that more complex cases (SMs endorsing more problem areas) received more health care after the PDHRA and SMs receiving health care services prior to the PDHRA were also more likely to receive healthcare after the PDHRA.

### **Combat exposure leads to greater likelihood of SMs endorsing any problem area on PDHA and PDHRA**

As expected, combat exposure was an important factor in predicting symptoms on the PDHA and the PDHRA. SMs who reported combat exposure were almost three times more likely to report any problem on the PDHA and twice as likely to endorse any problem area on the PDHRA. Furthermore, combat exposure explained 10% of the variance in number of problems endorsed on the PDHA and 12% of the variance in problems endorsed on the PDHRA. This represents a significant, but weak relationship. The lack of a strong relationship is contrary to previous literature, but may be explained by the limited information about combat exposure on the PDHA.

### **Behavioral health symptoms are commonly reported by SMs**

A large number of SMs report one or more symptoms of PTSD (24%, N=46,863 SMs), depression (10%, N=19,526 SMs), or relationship conflicts (13%, N=25,384) on the PDHRA. These rates are similar to, or greater than, SM reports of physical symptoms (29%, N=56,626), exposure concerns (25%, N=48,816), and TBI symptoms (14%, N=27,337). Further, the rate of behavioral health problems experienced by SMs may be higher than is reported on the PDHRA. Almost two-fifths (39%) of SMs who completed Vanderbilt's anonymous SM survey reported that since returning from deployment they had experienced an emotional, alcohol, stress, or family problem and/or have had friends or family suggest they seek help for such a problem. In addition, these SMs had more negative attitudes toward help-seeking and accepting mental health treatment than SMs who said they did disclose problems on the PDHRA. Thus, the very individuals targeted by the PDHRA may be the least likely to use it as a way to seek treatment.

### **A substantial minority of SMs admit to underreporting physical, emotional, and alcohol use problems on PDHRA**

Clinicians interviewed about the PDHRA process estimated that they believed that approximately one third of SMs do not fully disclose on the PDHRA. Interestingly, this estimate was quite close to SMs' report of whether they fully disclosed physical, emotional, and alcohol use problems on the PDHRA. Asked anonymously, two-thirds of SMs agreed that they had fully disclosed these concerns. However, over 600 (10.3%) SMs reported that they did not fully disclose physical problems, over 700 (12.6%) reported not disclosing emotional problems, and 800 (13.7%) did not disclose alcohol use problems. An additional 25% chose not to indicate (neither agree nor disagree) the status of their disclosure.

These anonymous results were compared with SMs' actual self-reported symptoms on the PDHRA. Excluding alcohol use problems, 43% of SMs who reported an emotional, alcohol, stress, or family problem anonymously on Vanderbilt's SM survey did not report similar problems on the self-report section of the PDHRA itself (including items related to PTSD, depression, and relationship conflicts). These results suggest that some SMS are underreporting problems on the PDHRA, although it is possible that SMs may have defined their problems differently as asked globally on the SM survey compared to the specific items on the PDHRA. It should be noted that on average, SMs were neutral to positive that the PDHRA had helped them to identify their concerns.

#### **The PDHRA clinician interview adds small value to increasing referrals**

One of the goals of the PDHRA clinician interview is to clarify and confirm the SM self-report. This may include not only questioning the SM about symptoms they report, but also about symptoms not reported in the event that the SM was unwilling or for some other reason did not document concerns. This is especially useful for items where SMs are reluctant to report because of perceived stigma, such as behavioral health issues. However, after accounting for the number of problems areas endorsed by SMs, clinicians documented concerns made only a small contribution to predicting who received a medical referral. The number of problem areas endorsed by the SM explained 20% of the variance in medical referrals; adding clinician major concerns as documented on the PDHRA explained an additional 7% of variance. While this leaves a large percentage of variance unaccounted for, the main point here is that the SM-reported problems are the main predictor of a referral, with the clinical interview as documented on the PDHRA adding a relatively small contribution. This evaluation included several methods that explored what occurs during the interview itself, providing important insight into why the clinical interview is less related to prediction of medical referrals than the SM self-report.

#### **The PDHRA clinician interview focuses on what SMs disclose on the self-report and the clinician is unlikely to ask about additional behavioral health problems**

All clinicians who were interviewed by VU staff mentioned that the primary purpose of the PDHRA was to identify and address SM concerns and get them the help that they need. Primarily, clinicians reported using positive responses from the SM self-report and the built-in alerts (e.g., for alcohol use problems) to guide the interview in addition to SM eye contact, sincerity, and expressions. Results from the SM survey and analysis of de-identified audio recordings of PDHRA interviews were consistent with findings from the interviews, suggesting that SM self-report of positive symptoms or problems is a major factor in determining the outcome of the clinician interview. While this provides value to the PDHRA process in terms of confirming that reported problems are ongoing, or alternately are no longer an issue, such an approach does little to increase the sensitivity of the clinical interview (i.e., increasing disclosure beyond what is already in the SM self-report). This missed opportunity for further screening is particularly relevant to behavioral health problems.

The PDHRA clinical interview did not discover SM behavioral health problems reported anonymously on the SM survey where the SM did not disclose them on the PDHRA. Instead, clinician concerns and referrals depended on whether or not these problems were reported on the PDHRA. Among SMs who had anonymously reported an emotional, alcohol, stress, or family problem on the SM survey, the average number of clinician major concerns was five times less

for SMs who did not disclose on the PDHRA self-report (mean=0.11) compared to those who did (mean=0.53). Similarly, receipt of one or more medical referrals for any reason was almost three times less for SMs who did not disclose on the PDHRA self-report (mean=0.14) compared to those who did (mean=0.67).

Some SMs may not choose to document problems on the self-report, but may be willing to disclose to the clinician if asked. These results are especially concerning given that a substantial minority (10-14%) reported on Vanderbilt's anonymous SM survey that they did not fully disclose physical problems, emotional problems, or alcohol use on the PDHRA. Another 25% chose not to indicate (neither agreed nor disagreed) about the status of their disclosure on the PDHRA.

Analysis of de-identified audio recordings of PDHRA interviews shows that clinicians are more likely to explore issues related to physical health than behavioral health regardless of whether or not the SM indicated a problem on the self-report. General health or physical health concerns were brought up by clinicians in over 84% of interviews. In contrast, behavioral health topics (PTSD, depression, and relationship conflicts) were mentioned at a much lower frequency (43-66%). Behavioral health topics were less likely to be brought up by the clinician when no behavioral health symptoms were endorsed (39-50%), which is in contrast to mention of general health or physical health concerns, which were mentioned by the clinician in over 87% of calls when no physical symptoms were endorsed.

#### **Clinician communication patterns and interview styles are highly variable with few rapport-building patterns observed**

Analysis of de-identified audio recordings of PDHRA interviews revealed that clinicians were highly variable in their approach to the PDHRA interview. For example, clinicians inconsistently ask about previous treatment, especially for mental health problems. Clinicians usually ask about previous treatment for physical health, general health, or TBI symptoms (87% to 92%), but are much less likely to do so for mental health problems (40 to 64%). In addition, the clinicians' behavioral risk assessment questions (i.e., SM's risk of harm to self or others) were occasionally not asked or asked incorrectly. As discussed above, clinicians were less likely to bring up mental health issues if not previously endorsed by SM. Further, communication patterns consistent with 'rapport building' were rarely used by clinicians with some rapport building strategies used so infrequently that several styles originally of interest (e.g., empathy, legitimizing statements) could not be analyzed.

#### **Clinician interviews are not reliable**

Clinicians generally do not perform their interviews in a systematic way. This was evident when SMs with multiple PDHA or PDHRA completions for a single deployment were compared. The SM self-reported sections of these PDHAs and PDHRAs were found to be highly reliable; that is, they tended to answer similarly both times they completed the form. On the other hand, clinicians showed little agreement on risk assessment, major concerns, and referrals, even when they completed the interviews within one week of each other. It is possible that some of the decline in agreement may be due to intervening health care or changes in the SMs' current assessment of their health status. However, the finding that the aggregated average correlations within the first week are about twice as high for the SM self-report portion (0.86 for PDHA and

0.88 for PDHRA) compared to the clinician portion (0.35 for PDHA and 0.46 for PDHRA) suggests that other factors are responsible for the low agreement between clinicians on risk assessment, major concerns, and referrals.

Because it is likely that the SMs interviewed with different clinicians for each completion, it is probable that the lack of consistency in the clinician interview is due to differences in the clinician's interview approach and documentation. One potential reason for the lack of a systematic interview approach is the absence of systematic and sufficiently intensive clinician training specific to the PDHRA. Clinicians who were interviewed about the PDHRA process indicated that training specific to the PDHRA was generally limited to shadowing of other clinicians, and that structured feedback was not routinely provided.

**Lack of time and high caseloads for the PDHRA clinician interview may limit its effectiveness**

PDHRA clinician interview are short, generally less than ten minutes. On Vanderbilt's SM survey, 59% of SMs reported interview durations ten minutes or less, and during site visits Vanderbilt researchers observed that interview times were less than ten minutes on average at most sites. In addition, as obtained from several interviews, the efficiency and potentially the effectiveness of the PDHRA process may be influenced by the limited availability of sufficient number of clinicians that, in turn, decreases the amount of time for each interview.

Clinicians expressed concerns about being able to be effective in the time they were allotted to process each SM. A major concern was the lack of time to establish a meaningful rapport with the SMs. Further, it was mentioned by clinicians that SMs sometimes rushed through the interview due to substantial time already spent waiting.

**Clinicians are more likely to give referrals and SMs are twice as likely to accept them when the interview occurs in person.**

The context of the clinical interview, whether it occurred in person or by telephone, was found to influence both giving a medical referral and SMs' declination of referrals. Despite similarity of documentation of major concerns across interview contexts, medical referrals were three times more likely to be given in-person than on the telephone. This translates into more than double the percentage of SMs who received a medical referral when interviewed in-person compared to telephone interviews. In addition, SMs were half as likely to decline a referral when interviewed in-person compared to SMs interviewing by telephone. Nearly double the percentage of SMs declined a referral when interviewed by telephone compared to in-person. Note that these findings are relevant to the Reserve component only. In addition, these analyses were conducted after creating equivalent groups of SMs using statistical methods due to differences in SM characteristics between SMs who were interviewed in person compared to those interviewed by telephone.

**Clinicians are more likely to indicate a problem for alcohol or TBI during a telephone interview, but in contrast are more likely to make a referral for TBI or alcohol problems when the interview is in-person**

For SMs in the Reserve component, SMs' self-reported problems and clinicians' documented concerns were similar between telephone and in-person interviews with the exception of

clinician concerns and referrals for alcohol and TBI. Clinicians were more likely to indicate a problem related to alcohol or TBI when the interview was by phone compared to in-person (2.5 times more likely for alcohol and 2 times more likely for TBI), but they were much more likely to indicate the need for a referral for alcohol (3.5 times more likely) or TBI (2.5 times more likely) when the interview was in-person.

### **Screening for alcohol use may be creating too many false positives**

Additional questions regarding alcohol were added to the 2008 version of the PDHRA and an algorithm was created to flag potential problems based partially on the number of drinks consumed. These additional criteria greatly increased the number of positive screenings for alcohol from 12% for previous versions to 42% for the 2008 version. However, despite the increased positive screenings, clinician concerns and referrals for alcohol did not increase between the two forms. Thus, if clinician judgment is used as a criterion, the self-report screening may be over-identifying SMs with alcohol problems. Moreover, based on analysis of de-identified audio-recordings of PDHRA interviews, clinicians pose alcohol questions differently than other concerns. They asked these questions in ways that may have encouraged SMs to downplay any problem they may have had (e.g., “So do you have an alcohol problem or is this just social drinking?”). Some clinicians directly told the SM that the scoring system was too sensitive during the interview. For example, one clinician said, “The military has a scoring system – a very harsh scoring system for how much they feel people should drink.” In addition, two of the behavioral health consultants interviewed by VU staff also mentioned that the algorithm used to determine a positive alcohol screen may be too sensitive because it is largely based on number of drinks consumed instead of how alcohol affects SMs' lives.

### **Educational information is rarely provided in PDHRA clinical interviews conducted by telephone**

An ideal time to provide general education about post-deployment issues that may be faced by SMs is during the clinical interview. Three of the clinicians interviewed by VU staff mentioned that they saw this as an important goal of the PDHRA, relevant not only to current symptoms but potentially to future problems as well. However, in PDHRA clinician phone interviews only 14% of SMs were provided mental health education; this percentage increased to 24% when a medical referral was given. Mental health education was defined as mention that other people have similar mental health concerns, provision of facts or figures about a mental health issue, and/or offering resources, other than referral, to the SM (e.g., websites, pamphlets). Since we only had access to phone interviews we do not know how often educational information is provided in in-person interviews.

### **Deployment cycle education materials considered helpful, but are not widely used by SMs nor consistently available at PDHRA events**

SMs were found to have more positive attitudes toward the PDHRA process when they had received education materials about post-deployment and reintegration issues. A majority of SMs who had been provided written materials, films or videos, or web sites to assist them in reintegrating post-deployment said they were helpful (80-88%). Yet only 36% to 57% of SMs reported they had used such materials.

Similarly, education about the PDHRA process was inconsistently given during pre-briefs at PDHRA events that Vanderbilt attended. Although educational pre-briefs were given at most locations, at only six of the ten sites was the PDHRA mentioned by name. At only three of the sites was the PDHRA process explicitly explained to SMs. This lack of education potentially contributes to SMs under-reporting problems. Importantly, SMs who were briefed by a unit leader were more likely to agree on the SM survey that they had fully disclosed on the PDHRA.

### **Education about post-deployment and reintegration issues improves attitudes toward the PDHRA**

Another form of education is Battlemind II, which is a video used by the Army to educate SMs about post-deployment/reintegration issues. Vanderbilt conducted a quasi-experiment to explore the potential influence of viewing Battlemind II on SM attitudes toward the PDHRA as measured by the SM survey. Compared to SMs who were not exposed to Battlemind II prior to completing the PDHRA, SMs who were exposed reported more post-deployment support and help seeking (i.e., support from family/friends and willingness to seek help), satisfaction with the PDHRA clinician, general willingness to self-disclose, less perceived stigma related to disclosure, and fewer barriers to accepting mental health referrals. Further, among those exposed to Battlemind II prior to the PDHRA process, a slightly greater percentage (7-10%) agreed that they had fully disclosed any type of problem on the PDHRA compared to those who were not exposed. This suggests psychosocial education such as Battlemind II improves the PDHRA process, but additional research is needed to understand if such education leads to actual changes in disclosure on the PDHRA.

### **Unit leader involvement and support is related to more positive attitudes toward the PDHRA**

Unit leader involvement and support is an important aspect of the PDHRA process. Results from the SM survey showed that SMs reported more positive attitudes about post-deployment and help seeking, PDHRA leadership support, and unit cohesion for personal problems when they had at least one NCO or Officer in theater with them or when they had a unit NCO or Officer brief them on the PDHRA. In addition, unit leadership support was found to be positively associated with a general willingness to disclose ( $r=0.31$ ) and satisfaction with the PDHRA provider ( $r=0.40$ ), as assessed in the SM survey. A common theme among clinicians and PDHRA program managers interviewed was that command support played a vital role in not only educating SMs, but more generally setting the stage to encourage SM openness during the process.

However, as suggested by some program managers, and by unit leaders themselves, the value of the PDHRA may not be completely understood by commanders. Although the PDHRA is a command-driven program, unit leaders may not experience direct benefits of the process. For example, the majority of unit leaders interviewed were ambivalent—they believed the PDHRA positively affected their unit's military readiness, but did not feel that the process influenced their ability to identify SMs with physical or mental health problems. Furthermore, unit leaders in active duty components, in contrast to those in reserve/guard did not receive any aggregated feedback about the outcome of the PDHRA and resulting referrals, so they have no way to measure the effectiveness of the process. This may have influenced some unit leaders who felt the PDHRA over-identifies SMs as having problems. Unit leaders also expressed concerns about

time taken from other duties to complete the PDHRA and conflicting priorities with limited time to accomplish them.

**Lack of confidentiality may influence SM perceptions related to the PDHRA process**

One reason that SMs may not feel inclined to disclose their problems on the PDHRA is related to concerns about confidentiality. SMs who reported they were planning to seek promotion in the next six months were slightly less likely to agree that they had fully disclosed problems or concerns about their emotional health on the PDHRA than those not seeking promotion. Further, SMs seeking promotion were likely to have more negative attitudes toward help-seeking and accepting mental health treatment than SMs not seeking promotion. Confidentiality was shown to potentially be a concern when only 25% of SMs completing the SM survey were aware of the DoD policy that no longer requires military personnel to disclose deployment-related mental health treatment when applying for security clearance. Finally, SMs who reported that they knew the clinician before the interview were significantly less likely to agree that they had fully disclosed any type of problem or concern. As a related finding, VU staff members observed inadequate privacy for the clinician interviews during two of the ten site visits. At these two sites, the clinicians were in a room sitting close enough that their conversations with SMs were audible to all the other SMs in the room.

**Stigma may not be important in affecting disclosure on the PDHRA**

This is the first study that has attempted to relate stigma to the reporting of disclosure on the PDHRA. There currently exists widespread belief that high stigma inhibits disclosure of symptoms. We did not find evidence of such a relationship between our measures of PDHRA self disclosure and stigma in this evaluation. In contrast, we did find that perceived stigma related to disclosure is greater for SMs who reported they were seeking promotion in the next six months, had an emotional, alcohol, family, or stress problem since deployment, or had friends or family suggest seeking help for such a problem. Further, these three variables were associated with SMs stating they did less than fully disclose on the PDHRA. It is vital that further analyses be conducted of potential complex interactions between SM attitudes and characteristics, and how they may influence actual behavior as evidence on the data obtained from the PDHRA itself. These findings suggest that mainstream strategies of simply reducing stigma may not be the most effective approach to increasing disclosure. Much of the data in this report supports an approach that emphasizes the importance of the immediate context of the PDHRA process that includes such interventions as Battlemind II, involvement of unit leaders, and greatly strengthening the clinical interview as an effective ways to increase disclosure. We recommend that stigma reducing strategies be tested in experimental designs before widespread adoption of this approach.

**Informal support from family and friends may encourage disclosure on the PDHRA**

Among SMs who reported emotional, alcohol, stress, or family problems on the SM survey, a majority (74%) had spoken to family or friends. Fewer had sought formal help from medical or mental health professionals (30%), and even fewer spoke with spiritual leaders (22%). As stated earlier, among SMs who anonymously reported a behavioral health problem almost two-fifths did not report them on the PDHRA. Yet, the sub-group of SMs who said they sought support from family and friends indicated they had experienced greater post-deployment support and were more willing to fully disclose on the PDHRA. This suggests another useful approach to

increasing disclosure on the PDHRA may be PDHRA-specific education and outreach targeted to informal support networks common to SMs.

### ***Further Evaluation Needed***

The findings presented above offer several insights into the PDHRA process and how it might be improved to help SMs access to appropriate care. The findings also highlight the complexity of these data, and that many questions remain unanswered. Appendix A describes future research needs relevant to this evaluation. Some questions can be answered through additional and more complex analyses of these data that were not possible within the time frame of when the data were received for this evaluation. For example, further analysis of the existing unique data set consisting of the SM survey data linked to PDHRA outcomes will provide important insight into actual behaviors rather than simply attitudes relevant to the PDHRA process. Another example is a more detailed analysis of HCE data, such as diagnostic codes and type of service provided to examine consistency with the types of concerns and referrals documented on the PDHRA. This analysis is one way to understand if referrals from the PDHRA are appropriate (i.e., do SMs receive diagnostic codes that are consistent with the PDHRA?). Further, since many SMs were potentially interviewed by the same clinician, SMs are clustered within clinicians and clinicians are nested within sites. These observations are therefore not independent, and future research should address the nesting nature of these data using hierarchical statistical models. These were not conducted for this evaluation because clinician and site identification were not available in the data received for this report.

Other questions can best be answered through controlled, randomized studies; some of which were proposed and approved for this evaluation, but could not be implemented despite very strong support received from the Services and DoD. For example, one of the goals of this evaluation was to understand if the context of the clinical interview (telephone vs. in-person) influenced SM disclosure of symptoms or acceptance of referrals. Because interview context is confounded with other factors (size of unit, Branch and Component), a controlled randomized study is the best way to answer this question. Unfortunately we did not find any units willing to participate by assigning SMs who would otherwise have received in-person interviews to receive telephone interviews. A future experiment is needed to determine if interview context changes the PDHRA process. As another example, the best way to understand the role of the clinician in the PDHRA process is to conduct a randomized controlled experiment with SMs randomly assigned to one of the following groups: (a) Clinician assessment only (the SM sees the clinician, but does not complete a PDHRA form); (b) Blind self-report (the SM completes the self-report but the clinician does not see it); (c) Self-report and clinician assessment (the typical PDHRA process); and (d) Control (PDHRA delayed from normal time of administration by at least two months). Comparison of clinician concerns and referrals, and SM health care encounters among these groups would help establish the role of the clinician in the PDHRA process.

### ***Recommendations***

#### **Require all interviewers to have successfully completed PDHRA-specific training**

The training available for clinicians on the military's Force Health Protection and Readiness web site (<http://fhp.osd.mil/pdhrainfo/training.jsp>) has not been revised since 2005. Further, we found

little evidence for implementation of several of the practices recommended on that site. For example, clinicians rarely used empathy statements or offered education about the PDHRA, common post-deployment symptoms, or treatment available. Although the training advises that "those most in need of mental health care may not actively seek treatment," clinicians often did not ask about mental health symptoms unless already endorsed by the SM.

Of greatest concern, most clinicians reported receiving little PDHRA-specific training. This should be required of all clinicians who conduct PDHRA interviews. Training should include the following:

- Clinicians must ask about items that are not endorsed, especially behavioral health issues. Such symptoms are common and SMs are likely to underreport them.
- Risk assessment questions must be asked of every SM and should be worded as printed.
- Clinicians should offer education about health symptoms and treatment options—even for items not endorsed.
- Guidelines to increase consistency in clinician documentation. Similar self-reports, especially by the same SM, should result in similar documentation of concerns and referrals.

#### **Provide clinicians with monitoring and feedback about their performance on the PDHRA**

Clinicians do not receive feedback about the referrals they make to determine if the referrals are appropriate. Clinicians cannot improve or evaluate their performance if they do not know the ultimate outcome for the SMs they screen. Such monitoring and feedback should include: (1) SMs complete a brief anonymous questionnaire about their visit with the clinician and allow the clinician to review these evaluations; (2) Follow up with the referred to health care providers to determine if they feel referrals made to them were appropriate and provide this feedback to the clinician. Using these two sources, the clinician can evaluate whether the referrals they are giving are appropriate.

#### **Establish quality assurance procedures for the clinician interview**

The contracted agency that conducts telephone screenings for Reserve and National Guard SMs records telephone interviews for purposes of quality control, but we found no such process for in-person interviews conducted by the contracted agency or military personnel (the contracted agency does review the completed PDHRAs from a portion of in-person interviews). Clinician interviews of all types should be monitored for quality, especially since it is unclear what, if any, training clinicians screening the Active components receive. Training and quality assurance may be particularly useful given that PDHRA clinicians are from a variety of professional backgrounds, such as physician assistants, nurse practitioners, medical doctors, etc.

#### **Establish clinician guidelines for a more structured and systematic PDHRA interview**

Clinicians should ask similar questions of all SMs regardless of what items are endorsed on the self-report. This will decrease variability in the interview process and increase sensitivity by allowing SMs to report problems they did not endorse on the self-report. This will help clinicians be as effective as possible given the short (usually less than 10 minutes) duration of the PDHRA interview. Further, decreasing SM wait times for the interview might help SMs feel less rushed during the interview and more likely to disclose.

#### **Encourage unit leadership involvement in and support of the PDHRA process**

Support from unit leadership is correlated with SMs having more positive attitudes about the PDHRA and reporting more willingness to disclose problems on the PDHRA. Unit leaders should give or meaningfully participate in a PDHRA pre-brief that encourages openness on the PDHRA and explains the process and its purpose. Unit leaders themselves should also be educated about common post-deployment problems and how the PDHRA can be an effective way for SMs to seek treatment.

**Re-evaluate the PDHRA alcohol screening and training provided the clinicians on this topic**

Consider making a positive screen dependent on evidence of functional impairment instead of only the number of drinks consumed. Training for clinicians that more clearly identifies the reasons for the AUDIT-C scoring system, how to deal with borderline scores, and how to talk about potential alcohol misuse rather than abuse should be considered.

**Provide greater visibility and incentive for SMs to take advantage of education for post-deployment and reintegration issues**

Education in the form of web sites, videos, and written materials were found to be helpful for a majority of SMs who used them. Steps should be taken to ensure that SMs are aware of these education opportunities. In addition, it may be that group education opportunities such as Battlemind II should be provided whenever possible, given the positive relationship found between exposure to Battlemind II and SM attitudes relevant to the PDHRA process. This latter recommendation is qualified given the need for Battlemind II to be evaluated with regard to actual outcomes from the PDHRA such as SM self-reporting and clinician documentation of concerns and referrals.

**Offer PDHRA-specific education targeted towards informal supports (religious and spiritual leaders and SMs' families and friends) to increase awareness of the PDHRA as a helpful source of support**

This would help target SMs who are experiencing post-deployment problems but may not disclose them on the PDHRA. The majority of SMs who reported behavioral health problems had sought support from family or friends, and to a lesser degree, from religious or spiritual leaders.

**Ensure greater confidentiality during the PDHRA process**

In an effort to increase disclosure of problems on the PDHRA, SMs should be given adequate space so that they can complete the self-report section without other SMs observing or listening. Finally, efforts should be made to emphasize to unit leaders and their SMs the DoD policy that no longer requires military personnel to disclose mental health treatment for deployment-related adjustment problems when applying for security clearance.

**Add questions to the PDHRA regarding SMs' combat exposure**

Combat exposure was found to be related to SM reported problems on the PDHA and PDHRA, although it is currently only assessed on the PDHA. Clinicians conducting the PDHRA do not have access to the results of the PDHA. Clinicians should be aware of the SMs' combat exposure during the PDHRA interview so that they can better understand the SMs' situation.

**Further research is needed to determine how SM attitudes toward the PDHRA affect actual reporting of problems and clinician documentation**

While the findings from the SM survey were provocative, there was insufficient time and resources due to government delays in receiving data for Vanderbilt to fully explore how SM attitudes assessed on the survey were related to actual behavior as found on the PDHRA. Additional exploration of the existing SM survey data presented in this report is strongly recommended in order to more fully understand the presence and implications of under-reporting of problems before recommendations can be made.

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## **Chapter 1: Overview**

This report describes the work completed under the contract (# W81XWH-07-P-1026) awarded to Vanderbilt University (VU) and titled “Program Evaluation of Post Deployment Health Assessment (PDHA) and Reassessment (PDHRA) Processes.” The contract was awarded for one year with an additional year option that was exercised for the period from September 29, 2007 through September 30, 2009 by DASD (FHP&R) after a competitive bid process to conduct an evaluation of the PDHRA process. The Statement of Work was modified on June 26, 2009 in response to government delays in obtaining required data and the contract was extended at no additional government cost to November 30, 2009 (see Appendix B).

### ***Evaluation Framework and Purpose***

This evaluation is congressionally-mandated and funded by GWOT dollars through a contract with Force Health Protection and Readiness (FHP&R). VU identified three main areas of focus for the evaluation of the PDHA and PDHRA through discussion and interaction with FHP&R and an Expert Panel (see Appendix B for a list of members). The primary intent of the evaluation is to assess how the PDHA and PDHRA contribute to increasing Service member (SM) access to appropriate care (namely, referrals for further evaluation). Access to care may be influenced by factors that: (1) inhibit or encourage SM self-reporting, (2) encourage elicitation of SM problems or concerns during the clinician interview, and (3) encourage SM acceptance of any referral that is suggested by the clinician.

This evaluation addresses five major tasks:

- (1) Perform a secondary analysis of PDHA, PDHRA, and health service utilization data. This analysis examined the self-report components of the PDHA and PDHRA to determine the relationship of embedded subscales individually and in combination to health service utilization and to other various criteria (e.g., degree of self-reported impairment, likelihood for referral for further assessment/treatment by clinicians, and diagnosis). Furthermore, we examined the relationships between PDHA and PDHRA forms when there were multiple completions of one or both forms for the same deployment.
- (2) Identify Service member (SM)-related factors that influence the PDHRA process and satisfaction with the process.
- (3) Describe how key individuals involved in the PDHRA process (i.e., unit leaders, program managers, and PDHRA clinicians) perceive and carry out their roles related to the PDHRA process.
- (4) Investigate how the context of the clinician screening influences efficacy. Are phone-based assessments equivalent to in-person assessments?
- (5) Investigate communication patterns between PDHRA clinicians and SMs to understand the clinician’s role in the process and how clinician communication influences SM disclosure of problems and acceptance of referrals.

### ***Components and Summary of the Evaluation***

The focus of the overall evaluation of the PDHRA process was on its sensitivity (i.e., is it identifying the SMs who need help) and not its specificity (i.e., is it identifying SMs as needing help who actually do not need help). We were most concerned with the underreporting of

symptoms on the SM self-report portion of the PDHRA process, DD Form 2900, and the ability of the clinicians to facilitate the SMs' reporting of symptoms and acceptance of referrals as warranted during the interview. All Branches and components of DoD participated in some aspect of the evaluation. The key components of the evaluation included:

1. A SM survey and a specialized study to examine the effects of education about redeployment (namely, Battlemind II) on SM reporting and referral acceptance
2. Semi-structured interviews with key participants in the PDHRA process
3. Content analysis of audio recordings of PDHRA clinician interview calls
4. A secondary analysis of PDHA, PDHRA, and health service utilization for SMs with a PDHRA dated between January 2006 and March 2009.

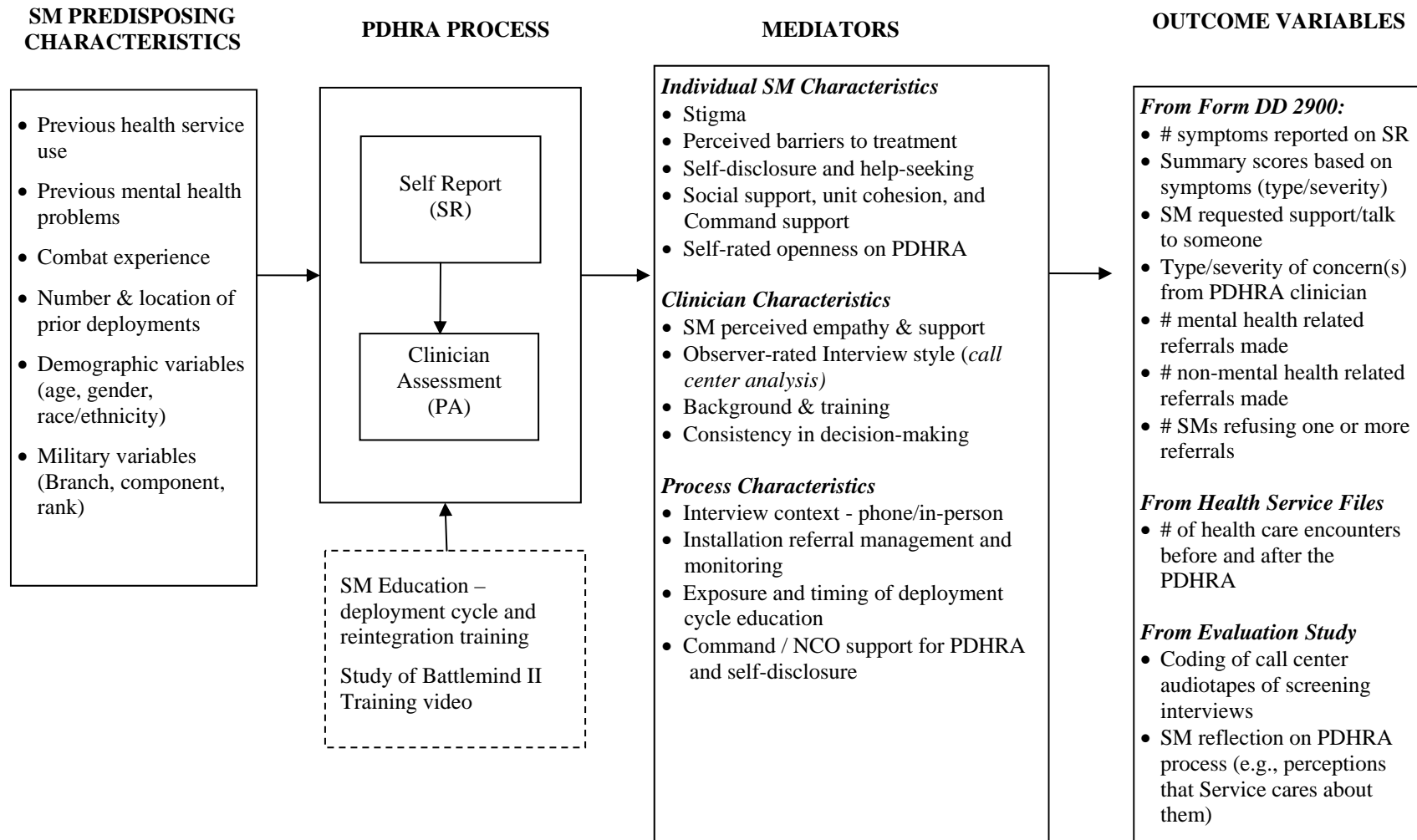
Three components of the study were attempted, but not completed due to problems in implementation.

1. Evaluate the appropriateness of referrals from the perspective of both SMs and referred to clinicians. This study was intended to follow up on SMs who received referrals and the clinicians providing those referral services to ask about satisfaction with the referral appointment. The study was cancelled due to insufficient number of volunteers and to confusion about the referral process among those who did volunteer. Please see Appendix C for a detailed explanation of the study status and reasons for termination.
2. A study using a randomized design to examine the effects of context of the PDHRA clinician interview (telephone vs. in-person) on referral rates, and on referral acceptance and compliance. We intended to randomly assign SMs within units to complete the PDHRA clinician interview via telephone or in-person. Without experimental intervention, all SMs in these units would have completed an in-person interview, and none of the units were willing to assign SMs to complete a telephone interview. Reasons included technical difficulties and a belief that in-person interviews were superior. Thus, we were not able to answer whether interview context does in fact causally influence the PDHRA process. We were able to conduct a study, however, of differences between already existing groups who completed telephone vs. in-person interviews using a correlational design.
3. A cost analysis of the PDHRA programs, including costs for preparation, implementation, and administration of the PDHRA, up to contact with the first referral clinician. Our goal was to understand the factors that influence cost of the PDHRA. Although we were able to obtain budget information for the PDHRA from DoD, we were not able to obtain detailed expenditure information from DoD or the individual Services. The necessary level of detail to conduct a cost analysis is not tracked, and thus was not available to us. Please see Appendix D for a description of the study status and reasons for cancellation.

### ***Logic Model***

This evaluation focused primarily on the PDHRA. A logic model was developed to provide a conceptual overview of how the PDHRA process operates and the assumptions underlying the process. It served as a conceptual tool in planning the evaluation and aided during interpretation of results presented in this report. The logic model, Figure 1.1, is presented on the next page with a brief explanation of the logic model that follows the figure.

**Figure 1. 1. A logic model which provides a conceptual overview of how the PDHRA process operates and the assumptions underlying the process**



The logic model proposes that SMs have predisposing characteristics that influence their completion of the self-report section of the PDHRA, which then influences the clinician assessment. The PDHRA process (self-report and clinician assessment) is related to the primary outcome variables, such as number and type of problems reported, number and type of clinician concerns noted, number of referrals made, and number of health care encounters after the PDHRA. The relationship between the PDHRA process and the outcomes are potentially mediated by SM characteristics and perceptions, clinician characteristics, and other factors determined by the PDHRA process. The logic model formed the basis for the conceptual development of the evaluation that is discussed in the next section.

### ***Conceptual Development of the Evaluation***

To develop and design a plan for studying the PDHRA process, we relied on inputs from several individuals, including our Task Order Officers (TOO), Col Joyce Adkins, Col Kenneth Cox, and Dr. Brian Sugden, our Project Managers, Dr. John Allen, and Dr. Charmaine Harrington, and an advisory group, the Expert Panel, convened by the TOO, and consisting of experts on the PDHRA process from each Branch and component of the military. Additional meetings were scheduled with other individuals and organizations, including the agency contracted to perform PDHRA screening for SMs in the Reserve and National Guard. Additionally, we attended the All-Army PDHRA conferences in late February of 2008 and 2009. Most of the developmental meetings with these individuals were held January 2008 – April 2008, and provided us with information on the typical PDHRA process in each military Branch and component, and helped us refine our study design and objectives. Please see Appendix B for a timeline of meetings with Expert Panel members and a comprehensive schedule of other meetings.

In addition to inputs from individuals mentioned above, we were also guided by our review of previous studies involving the PDHA and PDHRA, as well as studies addressing health care among SMs. Please see Chapter 2 for this literature review. Our aim was to build upon previous findings by increasing understanding of how the PDHRA process affects its outcomes. No previous study has evaluated the PDHRA process itself, nor sought to understand how each part of the process impacts the overall outcomes for SMs.

### ***Organization of the Report***

Chapter 1 provides summary, organizational, and background information relevant to the entire report. The Executive Summary and this Overview provide a broad introduction to the evaluation design and objectives. The literature review in Chapter 2 provides background on previous studies involving the PDHA and PDHRA, as well as studies addressing issues related to accessing health care among SMs. A presentation of common constructs on the PDHA and PDHRA and methodology is presented in Chapter 3. The evaluation results are presented in chapters 4 through 10, which include detailed methods, analyses, results and conclusions for each sub-section of the study. Each of these chapters addresses a particular topic or question relevant to the overall evaluation. A list of common acronyms and abbreviations is available at the end of the report followed by the references. Appendices are referred to in the relevant chapters and a list of appendices is presented in the Table of Contents.

## Chapter 2: Literature Review

Military personnel returning from deployments to Iraq and Afghanistan (OIF/OEF) are at a great risk for a wide range of physical and mental health problems. To screen for such difficulties and to refer Service members (SMs) in need of clinical evaluation and care, the military conducts two post-deployment health risk appraisals. The *Post-Deployment Health Risk Assessment* (PDHA; DD Form 2796, see Appendix E for 2003 version and Appendix F for 2008 version) is scheduled to be administered as close to the redeployment date as possible—within 30 days before SMs depart from an overseas assignment or within 30 days after they return to home station. The *Post-Deployment Health Reassessment* (PDHRA; DD Form 2900, see Appendix G for 2005 version and Appendix H for 2008 version) is scheduled to be conducted within 90 to 180 days of redeployment. Item content and clinical procedures for administering the PDHA and PDHRA are closely parallel. Each entails multi-stage processes requiring SMs to complete a structured inventory of physical and emotional symptoms, experiences with several aspects of combat (PDHA only), and exposure to several environmental and chemical agents while in the combat zone. Following this, the SM is individually evaluated by a health care provider and is provided with education and informational materials relevant to his or her concerns. Health care providers also make referrals for further evaluation and follow-up treatment on the basis of clinical judgment. While the majority of the armed services employ on-line administration of the PDHRA self-report and face-to-face clinical interviews, the process can vary for the Reserve components. SMs can complete the self-report on-line, on a handheld tablet, or by telephone; and the clinical interview can be completed in-person or by telephone.

Despite these efforts to identify and respond to the health care needs of SMs at-risk, previous research has demonstrated that a majority (up to 60%) of military personnel who screen positive for mental health problems do not seek any care (Hoge, Castro, Messer, McGurk, Cotting, & Koffman, 2004). The literature review that follows addresses important barriers to reporting and treatment-seeking treatment for health and mental health problems, the effectiveness of different approaches to health risk appraisal, and the necessity of evaluating processes like the PDHA and PDHRA. Note that the review is more heavily weighted with research related to mental health problems, since these are potentially more subject to under-reporting than physical health problems. We consider how individual-level barriers such as stigma and attitudes regarding help-seeking behavior may influence self-disclosure of mental health problems in a health risk appraisal process such as the PDHA and PDHRA. We then consider how structural barriers, or elements of the health risk appraisal process itself, may also present barriers to the accurate identification of and response to SMs presenting with mental health concerns.

Multi-gate screening is a term used in the literature to describe a screening process that uses more than one, often increasingly precise albeit costly, assessment. The PDHA and PDHRA are each forms of multi-gate screening processes. The first gate, the SM self-report, is a type of threshold-based screening, which typically consists of short questionnaires completed by individuals intended to determine if they meet a pre-defined threshold of risk in need of further evaluation. The second gate is a clinical screening, where the health care provider reviews the results in conjunction with an interview to determine need for further evaluation through referral. The major difference between typical multi-gate screening processes and the PDHA/PDHRA is

that usually only individuals who meet some criteria indicative of a problem move on to the second gate. While the PDHRA operates this way for the Air Force, where typically only SMs who endorsed problems are interviewed by a clinician, all SMs receive a clinical interview for the other branches of the military. We review both types of screening programs in addition to a third approach, predictive modeling, which uses statistical modeling to determine risk. For all three approaches (threshold-based screening, clinical screening, and predictive modeling), we review the literature on effectiveness including sources of error that may be introduced.

### ***Individual-Level Barriers to Reporting and Treatment-Seeking***

Barriers to care may include individual attitudes toward help-seeking, stigma, cultural and linguistic barriers, and practical barriers.

#### **Attitudes Toward Help-seeking**

Help-seeking can be defined in strict terms of making an appointment to see a professional or in looser terms of asking friends and family for advice. For the PDHRA, help-seeking could be defined as reporting symptoms on the self-report section of the PDHRA, endorsing items that ask about interest in receiving assistance for health concerns, and/or as accepting a referral from the health care provider. Here, we focus on the former two definitions, self reporting of symptoms and asking directly for assistance; the latter is the subject of the next section of this literature review. The goal of the PDHRA process is to increase access to appropriate care, and this goal cannot be met unless SMs are willing to seek help as defined above. Thus, it is critical for us to measure factors that influence the SM in seeking help/assistance.

Research has shown that help-seeking behaviors are related to the severity of the problem, but also to characteristics related to the individual, such as knowing how to access help and propensity to use health services, as well as the expected gains and risks associated with seeking help (Cohen, 1999; Koenen, Goodwin, Struening, Hellman, & Guardino, 2003; Salzer & Bickman, 1999; Vogel & Wester, 2003; Yates, Axsom, Bickman, & Howe, 1989). Several instruments have been developed to measure help-seeking (Cohen, 1999; Department of Military Psychiatry Walter Reed Army Institute of Research [WRAIR], 2006; Fischer & Farina, 1995; Vogel, Wade, Wester, Larson, & Hackler, 2007a). Note that only the WRAIR (2006) instrument measured a military population.

These instruments (e.g., the Willingness to Seek Help Questionnaire [WSHQ], Attitudes toward Seeking Professional Help: Short Form [ATSPPH-S], and the Unit Behavioral Health Needs Assessment Survey [UBHNAS]) identify several factors related to help-seeking. Influential demographic factors include gender (Barney, Griffiths, Jorm, & Christensen, 2006; Rowan & Campise, 2006; Santor, Poulin, LeBlanc, & Kusumakar, 2007; Vogel, Wade, & Hackler, 2007; Vogel & Wester, 2003), age (Barney, et al., 2006; Koenen, et al., 2003), and marital status (Koenen, et al., 2003). However, demographic factors are not something that we can modify to improve help-seeking, although this information can help us focus our efforts. For this evaluation, we concentrate on factors that are modifiable and that are most related to help-seeking on the PDHRA, including attitudes toward help-seeking, work/recovery environment, availability and accessibility of services, and personal and professional social networks.

Attitudes toward help-seeking, i.e., positive or negative feelings toward help-seeking behavior, predict intentions to seek help and actual help-seeking behavior (Vogel, Wade, & Hackler, 2007; Vogel, Wester, Wei, & Boysen, 2005). Factors that influence attitudes toward help-seeking include stigma, anticipated utility of treatment, propensity to self disclose, and social support (Ajzen & Fishbein, 1980; Koenen, et al., 2003; Vogel & Wester, 2003; Vogel, et al., 2005). All of these factors except stigma are positively related to help-seeking attitudes. The availability and accessibility of services also predicts help-seeking. For example, Koenen and colleagues (2003) found that almost 40% of individuals ( $N=668$ ) who had not sought help for PTSD (non-military population) reported that they were uncertain of where to get help or were concerned about the cost of treatment. Finally, strong personal and professional networks have been shown to increase SMs' resiliency (U.S. Office of the Surgeon Multinational Force-Iraq & Office of the Surgeon General United States Army Medical Command, 2008, February) and help-seeking behavior (Vogel, Wade, et al., 2007a).

Related barriers to help-seeking behavior, often labeled organizational barriers, that have been identified by military personnel include: difficulty in getting time off from work, not having adequate transportation, not knowing where to go, difficulty scheduling appointments, distrust in the mental health system, or financial strain (Chappelle & Lumley, 2006; Hoge, et al., 2004). Outreach and education to reduce these perceived barriers has been suggested as a necessary component of any effective mental health care system (Kelly & Jorm, 2007). Such education may include not only 'destigmatizing messages' and practical information on how to seek help, but also information on the effectiveness of available treatments. It has been suggested that greater confidence in effective treatment could reduce the stigma associated with mental health disorders (Corrigan, 2004; Meltzer, et al., 2000; Sammons, 2005).

The PDHRA process is intended to include an educational component in addition to the self-report and the clinical interview. For the Army, this has been formalized through the application of Battlemind II, a brief video-based interactive presentation that can be viewed privately online or, preferably, consists of a group-based presentation by a chaplain or other on-site individual involved with the PDHRA process. While Battlemind II has been found efficacious in decreasing PTSD symptoms and alcohol problems at a three-month follow-up (Milliken, 2008), no studies have examined the influence of Battlemind II education on the PDHRA process itself. If consistent with the literature reviewed above, such education could have immediate positive effects on SM self-disclosure of problems on the self-report through decreasing stigma and raising awareness of typical post deployment problems and concerns faced by SMs during the re-integration process. All Branches of the Armed Forces Services have some form of post-deployment education geared toward helping SMs and their families through the re-integration process (and pre-deployment too); however, Battlemind II is the only program of which we are aware that is intended specifically to be provided as part of the PDHRA process.

## **Stigma**

Stigma associated with mental health problems is a multi-faceted construct, and is widely accepted as impacting help-seeking behaviors, including both reporting of mental health difficulties and seeking care (Barney, et al., 2006; Center for Mental Health Services, 2000). Even among those who do seek care for mental health issues, stigma often reduces adherence to a treatment regimen or program, negatively affecting outcomes (Corrigan, 2004).

Stigma is of particular concern for behavioral and mental health problems. Of the SMs referred for behavioral problems on the PDHRA, 23.3% reported privacy concerns during the PDHRA process (Appenzeller, Warner, & Grieger, 2007). In Hoge's (2004) study, researchers found that military personnel who screened positive for mental health concerns were twice as likely as those who screened negative to express apprehension about possible stigmatization and other barriers to seeking mental health care. This may help explain the finding that among military personnel who screened positive, only 38-45% even indicated an interest in receiving help. The highest rated perceived barriers to seeking mental health services among all screened SMs ( $N=5,422$ ) were: "There would be difficulty getting time off work for treatment" (22%), "It would harm my career" (24%), "Members of my unit might have less confidence in me" (31%), "My unit leaders would blame me for the problem" (20%), "My unit leadership might treat me differently" (33%), and "I would be seen as weak" (31%).

Stigma associated with mental health has been operationalized as perceived stigma (an individual's beliefs about what others think) and self stigma (an individual's beliefs about him- or herself; Barney, et al., 2006; Greene-Shorridge, Britt, & Castro, 2007). Perceived stigma may influence self stigma (Vogel, Wade, & Hackler, 2007). In the military, both perceived and self stigma is relevant. As described above, SMs may fail to report symptoms because they fear consequences to their career, such as not being able to receive promotion or fear of peers' perceptions, or due to self stigma - feeling a negative attitude about themselves due to the problem. It is critical to measure the presence and source of mental health stigma in the military because it may influence the rate of symptoms reported on the PDHRA, and on the rate of receiving and accepting referrals.

Factors that affect mental health stigma include demographic variables such as age, sex, and culture (Hayward & Bright, 1997; Kelly & Jorm, 2007), as well as variables such as experience with psychiatric patients, beliefs about responsibility for and control of symptoms, and perceived social support (Greene-Shorridge, et al., 2007; Hayward & Bright, 1997). Here we are concerned with modifiable (non-demographic) factors that may affect self report and receipt and acceptance of referrals.

Researchers have measured stigma using several instruments (Corrigan, 2006; Fischer & Farina, 1995; Fischer & Turner, 1970; Hirai & Clum, 2000; Hoge, et al., 2004; Komiya, Good, & Sherrod, 2000). Note that the WRAIR (2006) and Hoge, et al. (2004) measures were for military populations. These measures take different approaches to measuring stigma, including asking subjects to rate their level of positive and negative perceptions of others with mental illness, how they would perceive themselves if they had a mental illness, actions (e.g., help-seeking) they would endorse for themselves or others if a mental illness were present, or rating behaviors as positive or negative when presented with a clinical vignette of a mentally ill person (reviewed in Hayward & Bright, 1997). Of course since these are self reports, the reporting of stigma may also be influenced by what the SM believes is the most socially acceptable answer. For example, it might be more difficult to admit that the SM does not want help because of negative attitudes about mental health (that the SM can seemingly control) than to say getting time off from work to see a "shrink" is a problem. We should be cautious in taking all the self report information as necessarily the real reasons that explain the behavior. It is just one piece of the puzzle.

## **Cultural and Linguistic Barriers**

Since the implementation of the 1973 All Volunteer Force, the U.S. military has become increasingly diverse in terms of educational background, racial, gender, ethnic background (U.S. Government Accountability Office, 2005, September). Although several challenges are present in the ability to accurately estimate military diversity, compared to civilian populations the U.S. military has proportionally more active duty African American SMs, and a growing Hispanic population which has increased from 5% in 1993 to 9% in 2004 (U.S. Government Accountability Office, 2005, September). On average, the population of active U.S. military SMs is younger, and less likely to have attended college than persons in the U.S. civilian workforce population. In 2006, nearly 2% of all Service members were not U.S. citizens, with the Philippines, Mexico, and Jamaica being the most frequently cited countries of birth for non-citizen SMs (U.S. Government Accountability Office, 2005, September).

Borrowing from the three functions approach (Epstein, Campbell, Cohen-Cole, McWhinney, & Smilkstein, 1993), previous research defined the effectiveness of medical encounters broadly in terms of the degree to which the following goals are achieved: (a) data gathering, (b) patient education, and (c) relationship building. Roter & Larson (2002) added a fourth goal: activating and partnership building. Effective communication patterns in medical encounters can facilitate each of these goals in that they provide a balance between absolute patient autonomy and what may be seen as clinician paternalism. Effective communication redistributes interpersonal power in an equitable way, serving to activate partnership building. Effective communication also builds rapport and increases familiarity. In medical encounters, patients and physicians should share the same goals. Interestingly and in support of this, primary care physicians and their patients were least satisfied with “narrowly biomedical” encounters compared to medical encounters in which patient values were respected and psychosocial talk was more prevalent (Roter et al., 1997).

Research has consistently found that effective communication (both verbal and non-verbal) is a fundamental requirement for the provision of appropriate health services (Collins, et al., 2002). Interpersonal interaction and communication affects patients’ attitudes, responsiveness, adherence to health care provider instructions, and subsequent utilization of the health care system in several ways (Collins, et al., 2002; van Ryn, 2002). A very basic impediment to effective communication exists where the patient and health care provider do not speak the same language. Language barriers reduce the ability for individuals to understand and accurately respond to screening assessments, accessibility and timeliness of health care services, and interferes with interactions between the patient and physician (Diversity RX, 1997). Differences in language, both verbal and non-verbal, make it difficult or impossible for some patients to describe symptoms effectively and for health care providers to relay pertinent information for additional assessment, prevention, and treatment (Diversity RX, 1997). Communication between patients and health care providers can be influenced by race/ethnicity, gender, and educational attainment as well. For example, Kaplan, Greenfield, Gandek, Rogers, & Ware (1995) found that minority and male patients, as well as patients without post secondary education, had the least interaction with their physicians. Furthermore, regional and class differences in the use of language, including pronunciation, vocabulary, and usage, can seriously impede communication and the ability to respond to certain types of assessments. The social distance that is often present between patients from rural or less educated backgrounds and health care providers puts these

patients at a disadvantage in communicating with providers and interferes with the provision of optimal care (Robinson & Gilmartin, 2002; U.S. Census Bureau, 2000).

In addition to barriers related to effective communication, cultural, racial, religious and ethnic diversity also influences help-seeking behavior and the acceptability of health care provider recommendations (Katz, 2001; Oddone, Petersen, Weinberger, Freedman, & Kressin, 2002). Common practices and treatments of conventional medicine may not be congruent with specific beliefs and values of some socio-cultural, racial, religious, or ethnic groups (Diversity RX, 1997). Variation may occur in how individuals interpret the cause and severity of symptoms, and they may turn to more acceptable religious and cultural traditions for treatment instead of procedures recommended by their physician (Katz, 2001). For example, Collins, et al. (2002) found that 27% of Asian American respondents, 22% of Hispanic respondents, and 12% of African American respondents, compared with 4 % of white respondents, reported cultural or religious beliefs as a reason for choosing alternative care. To the extent that knowledge of different treatment approaches available yield different patient outcomes, differences in treatment preferences contribute to bias in the symptom reporting (Katz, 2001).

### **Practical Barriers**

Diversity in the nature and complexity of military families has increased as well (U.S. Government Accountability Office, 2005, September). Over the past 40 years, the proportion of military personnel who are married has increased, due in large part to more supports for military families provided in an effort to reduce personnel turnover and the need to retain experienced personnel (Segal et al., 1976; Segal & Segal, 2004). According to most recent estimates, nearly half of military personnel are married (51%) and of those, 73% have children. In a substantial number of military couples (approximately 12%), both husband and wife are active enlisted (Segal & Segal, 2004). Given these trends, it is reasonable to assume that very practical barriers, such as familial obligations and work, may prevent some SMs from accessing necessary prevention and treatment services as recommended by their health care provider.

### ***Military-Specific Influences on Reporting and Treatment-Seeking***

#### **Risk Factors**

Several risk factors have been associated with post-deployment health symptoms, especially mental health symptoms. For example, the number, length, and location of deployments (Shen, Arkes, & Pilgrim, 2009), pre-deployment mental health treatment and diagnoses, and exposure to combat (Martin, 2009) have all been identified as risk factors for post-deployment mental health problems.

#### **Military Culture**

Military culture can also have a strong influence on individual behavior and willingness to disclose problems or seek help. Snider (1999) has suggested that this culture consists of several main dimensions: discipline, a professional ethos, ceremonial displays and etiquette, and cohesion and unit morale. Others have commented that this culture is one that values toughness and self reliance (Tanielian & Jaycox, 2008). However, these traits do not comprise a complete description of the organization, and various subcultures and heterogeneity may exist within the military culture and among the different Branches (Snider, 1999). According to Goffman (1960),

the military organization is a “total institution,” an organization that is distinct from regular society, in which all aspects are controlled by an authority. A total institution has a strict schedule, and the members of the institution perform their daily activities together. Since the military can be considered a total institution in some aspects, the military’s organizational climate and culture have an important influence over individual practices.

### **Unit Cohesion**

Unit cohesion is the bond between unit members and morale among the unit that is formed by their daily interactions and shared goals (Martin, Rosen, Durand, Knudson, & Stretch, 2000). The military’s work environment emphasizes trust and reliance on unit members, qualities that become essential in daily and combat tasks (Gould, Greenberg, & Hetherington, 2007; Keller, et al., 2005). Consequently, SMs may rely on buddy support for various concerns, including psychological stressors. According to one study, almost all SMs reported that they would either self manage or refer their peers who were experiencing worsening levels of stress (Greenberg, Henderson, Langston, Iversen, & Wessely, 2007). Keller and colleagues (2005) proposed that this unit cohesion be used to create a peer mentoring system for SMs.

Although unit cohesion can be a source of support, it may not always be a positive influence for health needs. The beliefs held by the unit may present barriers towards getting treatment. For example, some of the most frequently reported barriers by SMs returning from Iraq or Afghanistan were peer-related barriers. Of the SMs who screened positive for a mental disorder, 65% agreed that being perceived as weak was a perceived barrier to seeking mental health services, and 59% agreed that a perceived barrier was that their unit members would have less confidence in them (Hoge, et al., 2004). Because of the value placed on unit cohesion, any decision that might jeopardize their status among the unit might be avoided

The strong reliance on peers can also be a hindrance toward seeking professional help. SMs reported that they would rather seek help from a peer or friend than from professional medical or welfare services (Greenberg, 2006). Although social support is a generally positive force for one’s health, the sole reliance on peers may be problematic if the individual does need professional help.

### **Leadership Support**

As with unit cohesion, leaders in the military contribute both positive and negative aspects to the work environment. According to the hardy leader influence hypothesis, leaders may be able to influence the hardiness of their unit members (Bartone, 2006). Bartone supports this hypothesis that leaders high in hardiness are likely to influence their unit members to think about experiences with a hardy perspective, or to interpret stressful events as a challenge. The concept of a transformational leader corresponds with this hypothesis. Transformational leaders have close relationships with their subordinates and can influence their followers. Research has suggested transformational leaders can influence the group consensus, otherwise known as the climate’s strength (Zohar & Tenne-Gazit, 2008). Therefore, it is probable that such a leader might influence not only the organizational climate, but also the psychological climate and the psychological characteristics of individuals, such as hardiness.

Positive leadership may also have a relationship with the organizational climate. For example, among SMs, better leadership and greater unit cohesion were associated with less stigma and barriers to care (Wright, et al., 2009). These results should be taken with caution since it is not a causal association; however, the role of leaders in the social network demonstrates an important link with the organizational climate.

Military leaders may also worsen the stigma of mental health treatment. Navy leaders reported their primary concerns regarding SMs' utilization of mental health services was its effect on unit members' productivity (Westphal, 2007). The Navy leaders also reported that they thought unit members who use services may miss work and require more attention and time from the leaders. Since the military culture emphasizes working as part of a group, being perceived as less productive is potentially harmful to the SM. Even worse, SMs may perceive their leaders' negative views on mental health utilization and let it influence their decisions to get treatment. In a survey of perceived barriers among positively screened SMs, 63% agreed that their unit leadership might treat them differently, and 51% agreed that the leaders might blame the unit members for their own problems (Hoge, et al., 2004). In a culture where the chain of command is highly valued, leaders' attitudes are influential to the rest of the unit. These real and perceived negative attitudes of the leaders may influence SMs' opinions and decisions of seeking treatment.

In addition to harmful attitudes, leaders may lack the skills to adequately help their unit members. Leaders have reported a lack of training to address unit members' operational stress (Adler, et al., 2008). As a potential source of social support, leaders should be able to help their unit members deal with work-related stressors. However, without sufficient training, leaders may feel inept at dealing with unit members' stress, and unit members may avoid seeking their help. A potential solution would be to train leaders to deal and intervene with their units' stress-related problems. A concept called "chain teaching" has been implemented in the Army as part of a suicide prevention program (Lopez, 2009). Chain teaching requires leaders and commanders to educate their units and allows for the diffusion of information among all ranks. Chain teaching will attempt to promote the available mental health services and to reduce the stigma of help-seeking.

### **Mental Health Stigma in the Military**

The military clearly represent a population vulnerable to psychological distress and mental health problems (Langston, Gould, & Greenberg, 2007). In 2008, one-fifth of the SMs returning from Iraq and Afghanistan reported symptoms of PTSD or depression. Of these symptomatic SMs, only half sought treatment (Tanielian & Jaycox, 2008). Because of the large number of SMs who have symptoms of mental health problems and do not seek treatment, the military has been taking steps to fight the stigma associated with mental health treatment. One of the beliefs held by SMs is that seeking treatment will affect their career or prospects of employment (Burnam, Meredith, Tanielian, & Jaycox, 2009). Of SMs who screened positive for a mental illness, half agreed that receiving mental health services would harm their career (Hoge, et al., 2004). Of those who screened negatively, about one-fourth agreed that mental health services would harm their career.

In actuality, this belief is rarely confirmed. Of the SMs who self referred themselves for treatment, only 3% of them faced negative career impacts (i.e., change in duty status or discharge; Rowan & Campise, 2006). Of the SMs who had superiors encourage them to seek treatment, 5% encountered a negative career impact. However, for those SMs whose commanders ordered them to seek treatment, 39% of those SMs experienced a negative career impact. Although the latter percentage of SMs is higher than desired, the SMs who waited to be referred by a superior may have been worse off than those who voluntarily chose to receive treatment. Nonetheless, the majority of SMs who sought treatment did not face a negative career impact, regardless of how they were referred. The unlikelihood of treatment affecting one's career was also pointed out by other military sources. According to the Pentagon, less than 1% of SMs investigated for security clearances are rejected on the sole basis of their mental health histories (Dingfelder, 2009). The small percentage of SMs who did face negative career impacts may be salient to the military community and could be responsible for perpetuating the fear of career harm.

The DoD has tried to ease the fears of seeking mental health services by revising the security clearance questionnaire. As of May 2008, the questionnaire was revised to allow SMs to answer "No" to having received mental health counseling "if the counseling was for any of the following reasons and was not court-ordered: 1) strictly marital, family, grief not related to violence by you; or 2) strictly related to adjustments from service in a military combat environment." (Dingfelder, 2009). In another effort to reduce stigma, the DoD in May 2009 launched an anti-stigma campaign called, "Real Warriors. Real Battles. Real Strength" that shares the stories of SMs who have sought treatment. Although the DoD has been making significant steps to fight stigma, no research has been conducted to determine if these recent efforts have been effective in reducing the stigmatized beliefs of SMs or in affecting their help seeking behavior.

However, specific beliefs about barriers have seen an improvement in recent years. In comparison to a study conducted in 2004 (Hoge, et al., 2004), SM agreement with specific barriers to care was significantly lower by 2008 (Warner, Appenzeller, Mullen, Warner, & Grieger, 2008). Several factors may have contributed to the decrease in perceived barriers between the two studies that do not represent a change in attitudes. The time of survey administration may have been a factor. The SMs in the 2008 study were surveyed pre-deployment while the SMs in the 2004 study were surveyed post-deployment, and attitudes may have changed following deployment. Also, the SMs who participated in the studies represented different populations and demographics. However, the change may represent a real difference in attitudes as a result of educational strategies, including Battlemind II training and other military efforts. Of the perceived barriers reported by Warner and colleagues (Warner, et al., 2008), the biggest decrease in SM agreement was in the belief that SMs "would be seen as weak" if they sought treatment. Two of the barriers with the highest agreement rate were that "unit leadership might treat me (the SM) differently" and "members of my unit might have less confidence in me." These were also the two most commonly reported barriers among SMs in 2004. Thus, although the SM agreement with these barriers decreased between studies, stigmatizing beliefs surrounding mental health treatment still persist.

### ***Structural Barriers to Health Risk Appraisal and Referral Decision-Making***

Significant variations in referral rates on the PDHRA were found across different evaluation sites (Armed Forces Health Surveillance Center, 2008). For instance, about 10% of the variability was due to the medical screening site. This variation may be the result of the differences in the providers who perform the clinical evaluation or may be reflective of the different units' deployment experiences in combat. A maximally effective and efficient health risk appraisal system accurately predicts risk and meaningfully informs treatment decision-making. In order to achieve these goals of accuracy and utility, the structure and process of screening and health risk appraisal system should be sensitive and responsive to known individual and structural barriers. As Table 2.1 illustrates, common points of comparison among screening and risk appraisal measures include the domain assessed, constructs measured, format of administration, specific informant(s) providing data, timing and frequency of administration of assessment, cost, treatment utility, and sources of error.

**Table 2. 1. Variations in the structure and process of screening and risk appraisal measures**

<b>Dimension</b>	<b>Description</b>
Domain assessed	Risk factor(s) the health risk appraisal process is intended to identify
Constructs measured	Specific behaviors, experiences, or symptoms measured. Constructs should be logically and empirically linked to the domain of interest
Format of administration	Method of administration, context, type of assessment
Specific informant	Individual responsible for completing the assessment
Timing & frequency of administration	When the risk assessment is administered and how often informants are assessed
Cost	Human, fiscal, and system resources required to administer measure
Treatment utility	Extent to which information gained in the course of assessment can be meaningfully used to inform treatment decisions
Sources of error	Likely sources of error based on the domain, constructs, format, informant, timing/frequency of assessment measures

Just as there are several different “types” of health risk appraisal measures, so too are there variations in the way in which these measures might typically be utilized to identify and respond to risk in a given organizational setting. The approaches we review here include: (1) threshold-based; (2) clinical; (3) predictive modeling; and (4) multi-gated approaches to identifying individuals at-risk.

The appropriateness of the approach used depends upon the risk that is being measured, the time scale over which it is to be measured, course of the problem or disorder in question, and the purpose of predicting the risk. Each uses a different type of measurement that contains unique sources of error, but also has the potential to add unique information relevant to risk identification, and in some instances, intervention planning. In multi-gated systems, the domain

of risk and constructs measured are often held constant, but the format, informant, timing, frequency, and nature of information elicited at multiple stages of assessment may vary.

### **Threshold-based Approach to Health Risk Screening & Appraisal**

Threshold-based screening systems (Table 2.2) are also known as “universal”, “rules-based” or “criterion-based” surveillance systems. This approach requires organizations to screen potentially at-risk individuals, and establish a set of a priori criteria that define or describe the ‘high risk’ individuals. This is based on descriptive algorithms or clinical “threshold” scores as the basis for risk-assessment. During implementation, this technique identifies any individual who meets a specified criterion or threshold for a parameter of interest, such as the likelihood for hospital admissions or referrals (Cousins, 2002).

**Table 2. 2. Structure and process of threshold-based screening and appraisal systems**

<b>Dimension</b>	<b>Description</b>
Format	Self-administered questionnaires or surveys of behavior
Informant	Self-report
Timing & frequency of administration	Varies
Costs	Comparatively low
Treatment utility	Varies
Sources of error	Defensive and self-presentational biases in self-report; Variation in ability to understand and accurately report on internal events

The benefits of threshold-based systems include simplicity, efficiency, and transparency. The format of measures typically used in threshold-based screening systems is usually self-administered questionnaires or surveys of behavior. Because of this, the costs of administering threshold-based screening measures are lower in terms of fiscal and human resource demands. However, reliance only on self-report measures increases the likelihood of possible error in risk estimate due to systematic response biases such as defensive or self-presentational concerns (e.g., stigma) or difficulty accurately understanding or responding to the questions included on self-report measures (e.g., difficulty understanding terminology or accurately reporting on internal cognitive processes).

Available evidence regarding the relative effectiveness of threshold-based screening systems suggests that they are most accurate in predicting risk when used within a specific clinical context involving disorders with a fairly reliable set of concrete physical symptoms and disease progression (United Kingdom Department of Health, 2002). Because of this, the timing and frequency of measurements administered must be carefully coordinated with known variations in the expression of symptoms across time and populations. In addition, while clinical criteria may provide a set of concrete symptoms associated with mental health referral decision making, populations with sub-clinical presentations may be more difficult to identify as in need of further evaluation and screening. Substantial symptom severity and help-seeking behavior were found in

veterans with subclinical PTSD, although they did not meet the threshold for determining eligibility for disability benefits (Ruscio, Ruscio, & Keane, 2002).

In addition, threshold-based screening systems are predisposed to the negative effects of selection bias and regression to the mean. Selection bias occurs when individuals are selected because they are outliers who represent an extreme. This pattern of selection bias, in turn, can result in 'Regression to the mean' which describes a phenomenon in which those who are extreme during the first assessment (e.g., risk estimates) are rarely rated as extreme the next. This occurs when the measurement is to any extent unreliable and is subject to random swings so the highest probability is that the next measurement will be lower and closer to the group mean.

### **Clinical Approach to Health Risk Screening and Appraisal**

Clinical interview/observational screening systems rely on clinical expertise to guide the data collection and interpretation process. This technique will identify individuals at risk based on a structured or semi-structured clinical interview or examination process.

The benefits of clinical screening system are the depth and ability to probe and ask follow-up questions. Clinical screening techniques involve the use of very direct measures of behavior such as interview, physical exam, or observation. Moreover, direct measurement often affords health care providers the opportunity to rule out false-positives or rule in false-negatives that may be due to construct irrelevant factors such as stigma, reading ability, English language proficiency, etc. Health care providers also may bring to bear advanced knowledge on the interpretation of the "clinical significance" of assessment results in light of contextual variables. Clinical records can in turn become a valuable source of information for individuals responsible for subsequent intervention planning if such records are completely prepared and communicated.

Very little formal evaluation has been carried out to assess the relative accuracy of specific clinical screening techniques such as the clinical interview alone in predicting future risk, but that which has been undertaken suggests it can be accurate under certain conditions. In general, research suggests that health care providers may be able to identify patients who are currently high risk, but are less able to identify those who are going to become high risk in the future (Dudley, 1996). One study that examined the accuracy of staff predictions of readmissions of schizophrenia patients indicated that fewer than 20% of readmissions were predicted, but this was amongst a very small and specific population (Olfson, et al., 1999). The use of health care provider knowledge to identify individuals currently in need of an intervention can be effective but is typically limited to those patients in contact with a service. The preventative nature of case management is limited, as an 'event' would have to occur to bring about this contact. This method has been widely used in several health economies and, although some were effective in bringing about better health outcomes, they have not been proven to be efficient at identifying those at future risk.

The two basic functions in clinical decision making are collecting and interpreting data. The health care provider obtains information (e.g., medical history, family history, physical exam, prior test results) and processes that information to make a prediction about diagnosis and treatment (Eddy, 1990). In a perfect world, all health care providers would have access to the same clinical findings, have perfect knowledge of the meaning of those findings, process the

information in the same way, and come to the same conclusion. All variation in care would result from differences in clinical features, patient preferences, and available resources (Eddy, 1984). In actual practice, clinical decision making does not occur in a consistent manner due to error arising from a variety of individual and common factors.

### **Variability Due to Context of Health Care Provider Interview**

Validity of the clinical interview as part of a screening process can be influenced by context of the interview (whether face-to-face or by telephone). Research comparing telephone and face-to-face interviews for reliability and validity as screening methods for mental health and substance use problems generally focuses on rates of concordance and symptom reporting (Aziz & Kenford, 2004; Greenfield, Midanik, & Rogers, 2000; Rhode, Lewinsohn, & Seeley, 1997). Concordance, including inter-rater agreement and test-retest reliability, is typically high, indicating that independent raters judged the content elicited during the interviews to be comparable. The implication for clinical decision-making may be that regardless of context, health care providers generally agree on issues such as diagnosis and severity of mental health symptoms and substance use problems. This lends credence to the argument that telephone interviews are a reliable and valid method for screening. However, rates of symptom reporting have been found to differ based on type of problem being discussed.

The research is mixed on the influence of context on prevalence rates for mental health disorders. A particularly relevant study, while limited by a small sample size ( $N = 34$ ) was conducted with a veteran population at risk for PTSD (Aziz & Kenford, 2004). All participants were interviewed by telephone and in-person over a 30 day period by health care providers trained in the use of accepted structured protocols for depression and PTSD. A counterbalanced design was used, where interview order was by random assignment. High concordance was found between modalities for both PTSD and depression, with acceptable reliability and validity for the telephone interview. However, when conducted first, fewer symptoms were reported for telephone interviews and more symptoms were reported for face-to-face interviews for both depression and PTSD. In contrast, other similar studies with non-military populations have found comparable prevalence rates for depressive and anxiety disorders across modalities (Paulsen, Crowe, Noves, & Pfohl, 1988; Wells, Burnam, Leake, & Robins, 1988).

Regarding alcohol and substance use, differences may be found based on the purpose of the interview and study design. Using a semi-structured diagnostic protocol, fewer symptoms were elicited during the telephone interview compared to the face-to-face interview of the same individuals for alcohol and substance disorders (Rhode, et al., 1997). However, when simply assessing alcohol consumption, reported rates were equivalent for face-to-face and telephone surveys (0.16 vs. 0.14 drinks/day), although lower-income respondents (those in \$20,000-\$29,999 household income range) were found to under-report consumption when interviewed by telephone for both drinks per day and reported days in a year consuming five or more drinks (drinks/day: 0.18 for face-to-face vs. 0.09 for telephone, days 5+ drinks: 1.58 vs. 1.38; Greenfield, et al., 2000). Note that this study compared two separate national probability household surveys with large sample sizes.

### **Variability Due to Interview Style and Fact-finding Technique of the Health Care Provider**

Context describes the method of data collection (e.g., phone, face-to-face) and interview style, while fact-finding techniques describe the general verbal and non-verbal strategies used by the health care providers to elicit and clarify information during the interview process. Unless the interview style and fact finding procedures are standardized, health care providers may vary widely in the particular strategies they adopt. Studies dealing primarily with mental health conducted over the last few decades have found that clinical interview styles can have a significant impact on the nature of information elicited, and subsequent diagnoses rendered (Cox, Holbrook, & Rutter, 1981; Cox, Rutter, & Holbrook, 1981; Graham & Rutter, 1968; Hopkinson, Cox, & Rutter, 1981; Rutter & Cox, 1981; Rutter, Cox, Egert, Holbrook, & Everitt, 1981; Rutter & Graham, 1968). Traditionally, four distinctive styles of clinical interview have been identified: (1) the *sounding board style* characterized by minimal activity on the interviewer's part; (2) the *active psychotherapy style* characterized by frequent use of techniques to elicit feelings from the interviewee; (3) the *structured interview style* characterized by an active fact-oriented technique on the part of the interviewer, and (4) the *systematic exploratory style* characterized by both high fact and high feeling-oriented techniques. Research involving the direct comparison of these interview styles has found that health care providers employing the two fact-oriented techniques (structured interview and systematic exploratory) identified more symptoms of psychopathology and were better at identifying negative diagnoses (Cox, Rutter, et al., 1981). Other studies have found that utilizing more structured interview protocols, in general, may decrease variability in psychiatric diagnosis assigned (Hughes, et al., 2000; Piacentini, et al., 1993). It is doubtful that the results of these studies can be generalized to the PDHRA since diagnosis is not a goal of the PDHRA.

### **Variability Due to Experience and Knowledge Available to the Health Care Provider**

During the clinical interview process, novice health care providers often prematurely form hypotheses about the likely cause of presenting symptoms and then seek information to confirm or reject these hypotheses. In very complex cases, experienced health care providers may do the same thing (Elstein & Schwarz, 2002); however, less experienced individuals are more prone to this effect. The initial hypotheses, and often the resulting interpretation of presenting symptoms, may be influenced by such factors as when and where the health care provider was trained and the amount and quality of the individual's clinical experience. Recent research has suggested that among expert health care providers, the decision-making process is typically one of pattern recognition or direct automatic retrieval of facts relevant to interpreting the meaning of symptoms presented by the individual being assessed (Elstein & Schwarz, 2002). Studies of physician behavior conducted by Patel, et al. (2001) have demonstrated that experts are better able to organize information into manageable and meaningful "chunks", are less likely to attend to irrelevant information, and more likely to generate logical hypotheses based on the data presented (Patel & Groen, 1991). Because experts make greater use of clinical "schemas" or prototypes of typical cases, they are able to more efficiently and effectively integrate relevant sources of information during the interview and decision-making process (Patel, et al., 2001). Such differential access to diagnostic information can lead to apparently different patterns, and hence different initial impressions regarding the presence or significance of presenting

symptoms. Difficulty diagnosing patients' problems can lead to variations in care and referral practices.

However, the judgment of even the most experienced health care provider can be compromised by incomplete or inaccurate information on the causes, natural course, progression, and most reliable predictors of risk across the life-span. Although access to up-to-date information and professional development for less experienced health care providers may appear to be a logical response for dealing with variation in levels of training and experience, the development of expertise in clinical assessment is not necessarily linear. For example, there is an important distinction between the performance of experts (experts working on tasks relevant to their primary domain of expertise), sub-experts (experts working outside of their primary domain of expertise), intermediates (individuals with skills at an intermediate-stage between expert and novice such as intern or resident health care providers), and novices (individuals with limited experience and content knowledge; Patel, et al., 2001). Interestingly, research has demonstrated that intermediates may perform more poorly than novices on specific tasks such as the recall of patient data (Patel & Groen, 1991), explanation of clinical problems (Patel, Groen, & Scott, 1988) and generation of well-formed diagnostic hypotheses (Arocha, Patel, & Patel, 1993). This unexpected "intermediate effect" has been explained as a consequence of the natural ebb and flow of human learning and development. Specifically, it has been hypothesized that the development of expertise involves a continuous process of learning, re-learning, and application of new knowledge during which there are periods of apparent decreases in mastery and performance among intermediates as new information is learned and integrated (Patel et al., 2001). As such, the potential value of additional training, feedback and professional development may be somewhat dependent on the health care provider's particular stage of development with regard to his/her level of expertise in their particular work context.

### **Variability Due to Cognitive Biases, Errors and Heuristics in Clinical Decision-making**

With regard to possible sources of bias in clinical interpretation and decision making, both idiosyncratic and common cognitive errors in social information processing are relevant (Table 2.3). For example, health care providers may hold idiosyncratic beliefs or assumptions about patients based on their observed behaviors and characteristics (van Ryn, 2002). Van Ryn & Burke (2000) found that patient race and socio-economic status (SES) were associated with several health care provider perceptions about patients regarding intelligence, personality, risk behaviors, and compliance with medical advice. Caucasians were about twice as likely as African Americans to be rated as at no risk for substance use and noncompliance. Patients in the lowest SES category were twice as likely to be rated as irresponsible and irrational compared with patients in the middle and upper SES categories (van Ryn & Burke, 2000). Health care providers holding these beliefs may feel that a patient is less deserving of treatment based on certain social or behavioral characteristics (van Ryn, 2002). In turn, perceived stereotyping by health care providers may affect patient attitudes and perceptions and interactions between the patient and health care provider (U.S. Department of Health and Human Services [USDHHS] & Office of Minority Health, 2008; van Ryn, 2002).

Although the decisions of some health care providers may be influenced by assumptions related to socio-cultural background of patients interviewed, all health care providers are vulnerable to a

set of predictable set of cognitive errors, biases, and heuristics. These errors are due in large part to the cognitive demands placed on the health care provider during the decision-making process in which he or she must apply “heuristics” or cognitive shortcuts to make quick sense of the large amount of information they are presented with. Meehl (1954) was the first to make a distinction between clinical and actuarial (also known as statistical, mechanical, or algorithmic) decision-making from an information processing perspective. In this context, clinical decision making is defined as the internal process of combining information in order to make a treatment decision, whereas actuarial decision making is the process of making conclusions on the basis of established relationships between the data and condition of interest (Dawes, Faust, & Meehl, 1989).

**Table 2. 3. Summary of common types of cognitive errors, biases and heuristics which may affect the clinical information gathering and decision-making process**

Common Sources of Error	Description
Availability heuristic	Overestimating probability of a particular diagnosis because it is especially memorable or salient.
Confirmation bias	Selectively gathering and interpreting evidence that confirms a diagnosis and ignoring evidence that contradicts it.
Unpacking principle	Overestimating the probability of an event because information is provided in greater detail.
Influence of framing	Treatment and referral options may be selected depending on whether they are cognitively framed in negative.
Hindsight bias	Overestimating the probably of a diagnosis when the correct diagnosis is already known.
Influence of number of alternatives	When additional treatment options are added, health care providers are less likely to change referral behaviors.
Order effects	Information presented later in the interview process is given more weight than information presented earlier.
Anticipatory regret	Overestimating the probability of a diagnosis because of the personal level of regret the health care provider would feel if the diagnosis were overlooked and/or patient left untreated.
Representativeness heuristic	Estimating the probability of an event based on how similar the case is to a diagnostic category or prototype

Research over the last 70 years has consistently found that actuarial decision making is more accurate and less variable than clinical decision making in most cases. In a review of 617 comparisons in 136 studies published between 1920 and 1994, Grove, Zald, Lebow, Snitz, & Nelson (2000) found only eight studies in which clinical decision making surpassed the accuracy of actuarial decision making. Several factors have been cited as possible explanations for the superiority of actuarial over clinical decision making. First and foremost, the human brain is not

efficient at noticing, selecting, categorizing, retaining, retrieving, manipulating, and appropriately applying information for the purpose of making inferences (Grove & Meehl, 1996). As a result, clinical decision making is prone to fluctuations in judgment due to the influence of cognitive errors, application of heuristics, and biases (Dawes, et al., 1989).

For example, as mentioned previously, a health care provider's clinical experience does not come from a truly representative sample of the population. As a result, his or her perception of the relationship between variables is not necessarily representative (Dawes, et al., 1989). Consequentially, health care providers routinely ignore base rates when estimating the probability of a given diagnosis. Instead, they may consider each hypothetical diagnosis equally likely because they are looking at how close a particular case is to a diagnostic category or previously seen cases (also known as the representativeness heuristic; Elstein & Schwarz, 2002). There is also a tendency to overestimate the frequency of unusual and easily recalled events. Hence, health care providers tend to overemphasize rare conditions when making clinical judgments (also known as the availability heuristic; Elstein & Schwarz, 2002).

In addition, over the course of their training and clinical practice, many health care providers may develop inaccurate beliefs about the association between risk factors and observed symptoms (Dawes, et al., 1989). Unfortunately, these incorrect assumptions may be used as a frame to guide the clinical fact-finding process itself. As a result of the confirmation bias, health care providers may be more likely to attend to information that supports this initial hypothesis and reject or downplay evidence that refutes it (Dawes, et al., 1989). Error resulting from the interplay of these processes is compounded by the fact that past predictions are generally recalled as being more accurate than they were (also known as hindsight bias), thus inflating the health care provider's assessment of his or her actual decision making ability (Dawes, et al., 1989) and decreasing the likelihood they will regularly pursue alternate clinical hypotheses for presenting symptoms. In addition to these common cognitive errors, the personal regret a given health care provider anticipates feeling if he/she rendered an incorrect diagnosis or the patient was not provided appropriate care may also influence clinical decision-making and referral practices in rather unpredictable ways.

The timing and description of presenting symptoms on the part of the interviewee can also influence clinical assessment and decision-making procedures in unexpected ways. For example, information presented later in the decision process is typically weighted more than earlier information. Further, subjective probability of a given event or scenario is often overestimated when information is provided in greater or more elaborate detail (Elstein & Schwarz, 2002).

Despite recent efforts to introduce more decision rules, clinical pathways, algorithms, and evidence-based guidelines to the practice of medicine and other clinical professions, clinical decision making offers a number of important benefits that actuarial-only decision systems simply cannot provide. For example, humans can notice significant exceptions that may call into question actuarial conclusions. Psychologists call this the "broken-leg" scenario (Dawes, et al., 1989). The classic illustration is that a person who is predicted by an actuarial formula to attend a weekly movie does not. The actuarial formula should be disregarded because the person is in a cast as a result of a broken leg, preventing him from attending the movie. In other words, people can recognize the infinite number of potential rare events that cannot be included in an actuarial

formula. The difficulty is that people often mistakenly think they are seeing exceptions, when they are not (Dawes, et al., 1989).

Any actuarial formula, like the clinical-decision process, will lead to false positives and false negatives. Health care providers are in a unique position to adjust decision model cutoffs depending on reasoned judgments about the relative consequences of false positives and false negatives *for a given individual*. Health care providers can collaborate with patients to make treatment decisions that take into account individual values and preferences (Frosch & Kaplan, 1999), while actuarial systems alone cannot. Finally, health care providers are in a unique position to recognize when a false positive or false negative has occurred, appropriately respond to the situation by collecting additional information, testing alternate hypotheses regarding the likely cause of presenting symptoms, and ensuring that diagnoses and/or treatment plans are revised accordingly.

### ***Predictive Modeling Approach to Health Risk Screening and Appraisal***

In addition to threshold-based and clinician approaches, a third possible way of identifying individuals at-risk is through using statistical predictive modeling, which is commonly used in Public Health Surveillance Programs. Often referred to as “statistical” or “actuarial decision-making”, predictive modeling seeks to establish relationships between sets of variables in order to predict future outcomes. It usually incorporates formulae to allow organizations to interpret archival health data, make predictions about future health trends, and map associations and statistical relationships to a specific target. It then forecasts future events based on the identified relationships (Cousins, 2002).

Evidence points to predictive models being superior to both threshold models and health care provider knowledge alone in identifying patients at risk. However, within the category of predictive modeling is a large variety of techniques, some of which are more developed than others. To date, most predictive models have been derived using statistical regression techniques. Regression is a statistical technique used to assess the linear relationship between independent variables (these are the inputs, such as patient information) and a dependent variable (this is the outcome measure; for example a risk-related outcome). A number of different regression models have been used in this field (Ash, et al., 2000; Dove, Duncan, & Robb, 2003; Meenan, et al., 1999; Roblin, et al., 1999; Schatz, Cook, Joshua, & Petitti, 2003; Zhao, Ash, Haughton, & McMillan, 2003; Zhao, et al., 2001), including both linear and logistic regression techniques. Both aim to assess a linear relationship but differ in the type of outcome variable used. The linear regression model outcome variable is continuous and gives you the actual value (such as cost). However, the logistic regression outcome is binary (i.e., it has two categorical possibilities, such as whether an individual is ‘high risk’ or not) and produces a predicted probability between 0 and 1 of an event, such as hospitalization. Both types of models can be used to rank individuals in order to target the ones at highest risk.

The literature reveals that there are numerous predictive regression models that have varying degrees of accuracy. Models can vary in four ways: they vary in what risk they are predicting, in the type of data that they use, in the time over which they predict this risk and in the type of regression they use. The type of risk that is being predicted depends upon the purpose of risk prediction – as discussed above, it can be for the purposes of risk adjustment or for identifying

high risk individuals. Risk adjustment is a statistical process used to distinguish, and then correct for, variation due to individual patient characteristics, risk variables, or other differences that affect the outcome (The National Quality Monitoring Contractor, 2008). The majority of examples in the literature are concerned with predicting risk of high cost for the purposes of premium setting, although proxy measures such as hospitalization and medications have been used for cost (Bierman, 1999; Dove, et al., 2003; Reuben, et al., 2003).

Multi-gate or multi-level screening efforts are becoming more pervasive in public health prevention and early intervention efforts. This is particularly important for health problems with high morbidity and associated treatment costs and costs to the individual. Multiple gate screening procedures typically serve a surveillance, diagnostic, and treatment planning function. Multiple gates typically begin with brief screening measures, the least expensive and most easily administered to large populations. Further gates may differ depending on the problem of interest, but may include additional written screening measures and/or clinical interview. This approach to screening is often more complex than single-gate screening because it requires the coordination of multiple systems within an organization.

### ***Criteria for Evaluating the Quality of Health Risk Appraisal Systems***

Although a screening system may be an appropriate approach for helping systems to identify and respond to individuals at-risk, it is not useful unless it can reliably and accurately predict outcomes for the population of interest. *Validity* is the term used to describe the extent to which an assessment accurately measures what it is intended to measure. Criteria for judging the technical adequacy of assessments are described in the *Standards for Educational and Psychological Testing* (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 1999). These standards include criteria describing the proper assessment development techniques, evaluation procedures, and ethical application of psychological tests in a variety of contexts. In addition to producing reliable test scores, the *Standards for Educational and Psychological Testing* require that assessments and screening programs used for decision-making have empirically demonstrated validity with regard to content, convergent and discriminant power, internal structure, relationships with other related performances, and acceptable assessment consequences (AERA et al. 1999). While these standards describe the types of empirical evidence required before an assessment is considered appropriate for widespread use, three general types of validity are commonly used in evaluating specific screening instruments: criterion-related validity, construct validity, and content validity.

### **Accuracy in Predicting Risk: Sensitivity and Specificity**

The relative accuracy of the different models is measured in terms of ‘sensitivity’ and ‘specificity’. In general, sensitivity and specificity are measures that assess the validity of diagnostic and screening tests. Sensitivity describes how well the screening assessment detects the presence of symptoms in individuals who are truly at risk of emergency readmission or death or functional decline, etc., while specificity describes how well the test is at detecting the absence of symptoms in individuals who are truly not at risk (Figure 2.1). Practically speaking, a highly sensitive assessment is one in which a large percentage of the population is classified correctly as having the disorder; a highly specific assessment is one in which individuals without the disorder in question are not incorrectly identified as having the disorder. Ideal screening

assessments are maximally sensitive and specific, where 100% of individuals at-risk would be detected and risk would be ruled out in 100% of those who are truly not at risk. This framework is useful for evaluating decision rules or thresholds for a measure because it accurately reflects how an increase on any one of these indices tends to co-occur with a decrease on another. In fact, during development, researchers often use conditional probability analysis values to plot sensitivity against specificity using a range of thresholds to determine the ideal decision rules for classifying individuals into at-risk, or not-at risk groups. Both sensitivity and specificity are intimately related to both positive and negative predictive values.

**Figure 2. 1. Calculation of sensitivity and specificity**

Test Outcome	Condition		
	Positive	Negative	
Positive	True Positive (TP)	False Positive (FP)	$PV+ = TP/TP+FP$
Negative	False Negative (FN)	True Negative (TN)	$PV- = TN/TN+FN$
	$Sensitivity = TP/TP+FN$	$Specificity = TN/TN+FP$	

The positive predictive value (PV+) is the percent of positive tests that are truly positive. The negative predictive value (PV-) is the percent of negative tests that are truly negative. Like sensitivity and specificity, PV+ and PV- also show how well the test is classifying individuals into disease and non-disease groups, but the denominator for PV+ is the total number of persons who test positive, while that for PV- is the total number who test negative. A test with a high PV+ value means that there is only a small percent of false-positives within all the individuals with positive test results. A test with a high PV- value means that there is only a small percent of false-negatives within all the individuals with negative test results.

### Goodness of Fit

Indices of the “Goodness of Fit” are most commonly used to describe the quality of predictive models of risk or how well these regression-based models ‘fit’ the actual data observed. Predictive models derived from linear regression typically use R-squared ( $R^2$ ) as the primary “goodness of fit” index, whereas the goodness of fit of models based on logistic regression are typically measured using receiver operating characteristic (ROC) curves (Hosmer & Lemeshow, 2000).  $R^2$  indicates the percentage of total variation among individual observations that can be explained by the model, either explained as a percentage or a number between 0 and 1; 0 explains none of the variance, 1 explains all the variance (Hu, 2004). Thus, the closer a model’s R-squared value is to 1, the better the predictive model explains the data. For logistic regression models, the relationship between sensitivity and specificity is usually explored using a ROC curve. To construct the ROC curve, the x-axis is 1 minus the specificity (false positive) and the y-axis is the sensitivity (true positive rate; Crichton, 2002). The area under the curve (AUC or c-statistic) can summarize the capacity of a model for discriminating those who experience the event of interest (for example, risk of admission) versus those who do not, and can therefore be used to compare models (Liu & Wu, 2003). The evaluation results in the following chapters provide a strong basis of understanding of the relationship of various factors that may influence the PDHRA process as a precursor to this more specific approach to determining accuracy of predicting risk.

### ***Summary of Issues Influencing the Effectiveness of PDHA/PDHRA Health Risk Appraisal Process***

Several issues may influence the effectiveness of any health risk appraisal process, such as timing and setting of the appraisal, type of appraisal materials/process, or health care provider characteristics. The PDHA is administered shortly before SMs depart an overseas assignment or shortly after they return to home station. The PDHRA program is intended to provide a second appraisal point 90 to 180 days after the PDHA. Anecdotal evidence indicates that service personnel may be reluctant to answer mental health questions at the first appraisal point accurately for fear of delaying their well-deserved leave (Rona, Hyams, & Wessely, 2005). Other evidence points to a greater likelihood of reporting mental health concerns three to four months after returning, although two-thirds of SMs who accessed health care typically did so within two months of returning home (Hoge, Auchterlonie, & Milliken, 2006).

The process and materials used in health risk appraisal also influence effectiveness of identifying individuals in need of further evaluation for the condition(s) being screened. Self-report questionnaires have yet to be proven accurate in the general population (Gilbody, House, & Sheldon, 2001). As described above, a significant problem with any appraisal is differentiating between the presence of symptoms and serious health disorder requiring treatment. For example, self-report questionnaires have shown to both over- and under-estimate the prevalence of any given disorder (Jones & Wessely, 2001). To date, the few studies on military health risk appraisal questionnaires have shown low to moderate levels of sensitivity in identification of clinically important conditions among the military population (Hoge, et al., 2006). However, Bliese and colleagues (Bliese, Wright, Adler, Hoge, & Prayner, 2005; Bliese, Wright, Adler, & Thomas, 2004; Bliese, Wright, Adler, Thomas, & Hoge, 2004) reported sensitivity rates, between 68-80% and specificity between 78 – 86%, for behavioral health subscales on the PDHA and/or PDHRA. These were self-reported symptoms of PTSD, depression, alcohol use problems, and relationship conflict.

The effectiveness of the post-deployment health screenings depends on the candor of SMs completing the screenings. Warner and colleagues found that Soldiers prefer surveys and interviews like the PDHA and PDHRA rather than a full mental health interview. Soldiers indicated they would be more honest on such surveys and interviews (Warner, et al., 2008). However, only 39.3% of Soldiers agreed that they would report honestly on the PDHA within 48 hours of returning the United States. In comparison, over half of the Soldiers agreed that they would report honestly after the first two weeks home. They also would be more honest with interviewers from their unit or other combat units than civilians or non combat unit mental health providers (Warner, et al., 2008). Since SMs admit to reporting inaccurately around the time immediately returning from deployment, the PDHAs conducted around this time may be less accurate than the symptoms reported on the PDHRA, conducted at least 90 days after returning from deployment.

Further, the effectiveness of any appraisal depends on the resulting behavior of the health care provider. Receipt of symptom-related information from health risk appraisal questionnaires does not necessarily result in any greater likelihood of patients receiving tests, prescriptions or referrals (Jackson, Kroenke, & Chamberlin, 1999). That primary health care providers were not comfortable addressing mental health symptoms, even after provision of training, may be part of

the reason for the underreporting of symptoms. For appraisal processes that include a self-report questionnaire and clinical assessment, the sensitivity and specificity for the individual components have not been established (Rona, et al., 2005). These findings are complicated by the similarity of symptoms among mental health problems and the subsequent difficulty distinguishing among potentially related disorders, such as mild traumatic brain injury (Hoge, et al., 2008). Furthermore, the effectiveness of the screening process depends on how the screened population views the process. Warner, Appenzeller, Mullen, Warner, & Grieger (2008) found that SMs preferred surveys, interviews, and speaking with unit providers. Participants in that study also noted the importance of support for help-seeking from family and friends for successfully reducing barriers to mental health care.

### ***Need for Comprehensive High Quality Evaluation***

The need for a comprehensive evaluation of the PDHRA process is apparent from the findings in three recent US GAO reports (U.S. Government Accountability Office, 2008, January 25; 2008, September 4; 2009, November). The first report (2008, January 25) describes the administration of the PDHRA in the Reserve and National Guard. The PDHRA screening occurs either in-person or over the phone via a call center, but there has been no evaluation of the relative effectiveness of these methods. Nearly half of the screenings, regardless of context, result in referrals, but has been no analysis of whether rates differ depending on context. Furthermore, rates of referrals are higher for Reserve/National Guard SMs than for active duty SMs (Milliken, Auchterlonie, & Hoge, 2007). Several hypotheses have been advanced to explain this difference, including differences in work/recovery environment, social support, and perceived availability of care, but no study to date has sought to collect data related to these issues specific to the PDHRA.

A second US GAO report (2008, September 4), focused on measuring compliance and quality assurance in the Active component. The report concluded that quality assurance was inadequate, mainly because adequate information was not available to compute compliance, and because there was no evidence of a concrete plan or actions to improve this. Furthermore, it was recognized that one barrier to a successful Service-wide quality assurance program is that Services are allowed to vary administration of the PDHRA. While measuring compliance is just one aspect of measuring success of the PDHRA, it is also necessary to examine the process itself, and to understand how each part of the process affects outcomes.

It has been suggested that implementation of a health risk appraisal program without evidence of effectiveness could potentially be harmful (Rona, et al., 2005). However, provision of wide-scale screening can be a useful mechanism to reduce the significant costs associated with untreated health and mental health problems. Westphal (2007) identified specific costs of untreated mental health problems in the military workplace, including replacement of SMs and increased costs for delayed treatment.

A third US GAO report (U.S. Government Accountability Office, 2009, November) identified that there was a substantial number of missing active and Reserve PDHRAs from the DOD's central repository. They determined that 23%, about 74,000, of the SMs who returned from deployment to Iraq or Afghanistan (between January 1, 2007 and May 31, 2008) did not have a completed DD Form 2900 in the depository. A second query, about 5 months later, revealed that

about 72,000 SMs still did not have a completed form in this central location. It is not clear at this time if this is an accurate representation of missing PDHRAs or if this mostly represents legitimate reasons for the identified gap. However, this suggests that our analyses may not include the entire population of SMs who were deployed and eligible for the PDHRA.

Of particular note is the shared belief that there is a need to improve the ability of the PDHRA to detect the need for and make appropriate referrals. As mentioned above, both seriousness of symptoms (i.e., presence of disorder) and increased access to care (e.g., referral or treatment offered) are important criteria to be included in any test of the appraisal process. In addition, the *appropriateness* of referral or treatment offered is an important third criterion, but has received little attention in the literature. Validation of the PDHRA in comparison to diagnostic severity has been previously conducted (Bliese, Wright, & Adler, 2005; Bliese, Wright, Adler, et al., 2005; Bliese, Wright, Adler, & Thomas, 2004; Bliese, Wright, Adler, Thomas, et al., 2004). Our evaluation will focus instead on the overall PDHRA process and on the appropriateness of referrals offered.

## Chapter 3: Common Constructs and Methods

Two post-deployment health risk appraisals are used to screen for physical and mental health problems and to make referrals for further evaluation when Service members (SMs) return from deployments. The *Post-Deployment Health Risk Assessment* (PDHA; DD Form 2796, see Appendix F) is scheduled to be administered within 30 days before SMs depart from an overseas assignment or within 30 days after they return. The *Post-Deployment Health Reassessment* (PDHRA; DD Form 2900, see Appendix H) is intended to be conducted within 90 to 180 days of redeployment.

The PDHA has 248 individual items and the PDHRA has 166 items. Similar items were grouped into categories in order to reduce the number of variables used in analyses and increase the coherence of the resulting findings. This chapter describes those common constructs and methods of defining components and outcomes contained in the PDHA and PDHRA that are used for the remainder of this report. Furthermore, procedures for data reduction and variable definitions (e.g., health care encounter) are described in detail. Thus, the information presented here is relevant to the remainder of the report and will be referred to as necessary in subsequent chapters. Data sources and procedures for data preparation are described in detail in Appendix I. Additional data sources that were used only for individual chapters are included in the relevant chapter.

Tables 3.1 through 3.3 provide an overview of the primary constructs discussed in the remainder of the report. Table 3.1 introduces SM-related characteristics that could influence the outcomes of interest, and are therefore statistically controlled for in many analyses.

**Table 3. 1. SM characteristics**

SM Characteristics
Cohort- date of departure from theater
Time between departure from theater and PDHRA
Branch and component
Combat exposure
Deployment location
SM reported problems

Table 3.2 introduces the PDHA and PDHRA constructs used for analysis. See section below titled “Grouping SM Self-report Items by Content and Reduction of Content Areas” for a detailed explanation of how and which items were grouped into constructs. While individual items may differ from each form, the constructs are theoretically similar.

**Table 3. 2. PDHA and PDHRA constructs**

Construct of Interest	Description	Available in PDHA	Available in PDHRA
<b>SM self-reported problem areas</b>			
General health history	SM has ongoing health problems, a wound/injury, treatment history	x	x
Physical health concerns	SM endorsed specific concerns ranging from bad headaches to increased risk taking	x	x
Exposure concerns	SM endorsed specific exposures ranging from insect bites to depleted uranium	x	x
TBI symptoms	Memory problems, balance and/or dizziness, ringing in the ears, sensitivity to light, irritability and/or headaches	x	x
PTSD symptoms	Feelings of anxiety, irritability, nightmares/trouble sleeping, anger, watchful/easily startled and/or feeling numb or detached	x	x
Depressive symptoms	Feeling down, depressed or hopeless. Having little interest in doing things	x	x
Alcohol problems	SM scored positive on the AUDIT-C for number of drinks and/or functioning difficulties	x	x
Relationship conflict	Conflict with family members, friends and co-workers		x
Requests for support	SM requests information or referral for a concern (e.g., SM indicates s/he would like to receive information or assistance with stress)	x	x
Overall PDHRA	Number of the above problem areas endorsed or presence/absence of any of the above problem areas	x	x
<b>Clinician assessment</b>			
Clinician risk questions	Direct questioning to SMs about their intent to harm themselves or others	x	x
Clinician risk assessment	Assessment to determine whether the SM poses a safety risk to themselves and/or others	x	x
Clinician major concerns	Major concerns clinician has about SMs' symptoms	x	x
Any referral	A recommendation for the additional evaluation of a particular problem or concern that may require care; included declination of referral	x	x
Any medical referral	Referral to primary care, behavioral care, or specialty care	x	x
Primary care referral	Referral to a primary care provider for further evaluation and assessment of a potential problem or concern	x	x
Behavioral care referral	A specialized referral to a provider who treats problems related to behavior patterns and how these patterns impact the individual and/or their relationships	x	x
Specialty physical care referral	Referral to a physician specializing in a particular area of physical care (e.g., an orthopedics specialist, a physician specializing in the treatment of maladies in the skeletal system and associated muscles, joints and ligaments)	x	x
Military OneSource referral	Military OneSource is a 24 hr service that can provide counseling for both the SM and/or family members as well as other non-health related services	x	x
Other non-medical referral	Referrals to services not related to a medical need (e.g., referral to chaplain)	x	x
Declination of referral	SM declined referral	x	x

Table 3.3 introduces the health care encounter (HCE) variables that are available for Active Duty SMs.

**Table 3.3. Health care encounters**

HCE variable
Health care encounters six weeks before the PDHRA
Health care encounters up to six weeks after the PDHRA
Health care encounters between the PDHA and PDHRA

### Data Reduction for DD Forms: Grouping and Scoring SM Self-report Items

Several items had multiple response options that needed to be simplified to determine positive (had a problem) or negative (no problem) responses. In addition, prior to analyses, all SM self-report items on the DD Forms 2796 and 2900 were reviewed for potential ways to reduce the total number of analyses by grouping items according to similar content.

### Scoring Individual SM Self-report Items as Positive or Negative

The majority of items in the SM self-report for each of the forms consisted of dichotomous response choices, where the individual either checked a box if a symptom was present or chose between yes or no responses. A check or a ‘yes’ response was scored as positive, indicating the presence of a problem. A blank check box or a ‘no’ response was scored as negative, indicating the absence of a problem as reported by the SM.

However, several items consisted of multiple choice responses, where in addition to indicating a problem, the SM could also indicate the severity of a problem if present. For the DD Form 2900 items with three or more answer choices, the Air Force recommendations for positive responses (Air Force, 2008; Appendix J) were used to transform items into dichotomous variables (positive or negative response). We chose the Air Force policy as the most permissive approach to determining positive responses for individual items since the policy is intended to alert health care clinicians to the need for follow-up, typically in the form of a clinical interview.

An example of a multiple choice item is question 5 on the self-report portion of the DD Form 2900. Figure 3.1 below shows the question and response choices with positive responses indicated by shaded boxes. For this item, a negative response was scored if the SM indicated “No visits,” “1 visit,” or “2-3 visits” and a positive response if the SM answered “4-5 visits” or “6 or more.”

**Figure 3.1. Example SM self-report item with multiple response choices**

5. Since you returned from deployment, about how many times have you seen a healthcare provider for any reason, such as in sick call, emergency room, primary care, family doctor, or mental health provider?
- ☐ No visits
 ☐ 1 visit
 ☐ 2-3 visits
 ☒ 4-5 visits
 ☒ 6 or more

*Note: Figure reproduced from page 16 of Post-deployment Health Reassessment Application: User's Guide (Air Force, 2008)*

The Air Force User's Guide makes recommendations for positive responses on the DD Form 2900, but there is no similar guide for the DD Form 2796. Where possible, recommendations for the DD Form 2900 were transferred as closely as possible to the DD Form 2796. We also relied

on the recommendations of the PDHRA Expert Panel convened for this evaluation (Appendix K, and see Appendix B for Expert Panel members).

Results for analyses of individual items are presented in the form of percentage of positive responses (e.g., 20% of all SMs reported being wounded, injured or assaulted during deployment). Where items were grouped by concept, results are presented as average counts of all items positively endorsed within a group (e.g., on average, SMs endorsed 0.5 PTSD symptoms out of 4 items).

### **Grouping SM Self-report Items by Content and Reduction of Content Areas**

All items in the self-report portion of the DD Form 2796 (PDHA; January 2008 version, Appendix F) and the DD Form 2900 (PDHRA; January 2008 version, Appendix H) were reviewed for similar content, which allowed us to conceptually group items for analyses. Thus, results can be presented by concept rather than by item.

In addition to the strategy of grouping items by content area for use in analyses, psychometric analyses were also conducted to explore the reliability of the SM self-reported content areas as individual scales. As described further in Appendix L, all subscales met the criteria for internal reliability with the exception of alcohol problems. Further, the overall scale, consisting of all subscales summed together, was found to be reliable. These findings offer further evidence that the use of scales, rather than individual items for this report is an efficient way to represent the data. Note that the items included in the psychometric analyses sometimes differed slightly from the items used in this report (see Appendix L for further detail).

The psychometric analysis not only explored the internal reliability of SM self-reported content areas as scales, but also explored the reliability of individual items within each scale. If a group of items is a reliable measure of a single construct, such as depression or physical health status, those items must be correlated (Lord & Novick, 1968). Individual items that have a low correlation with the other scale items should be removed from the scale to increase reliability. This is the reason that some items were dropped from certain scales, as described below (see Appendix L for additional explanation). The following describes each of the scales that were used as outcomes of interest in this report.

#### ***Physical Health Status***

This group of items consisted of questions 1 through 8 on the PDHRA self-report and questions 1 through 7 on the PDHA self-report. SMs reported on their recent overall health status, changes in their health compared to before deployment, and health service utilization since deployment (including clinician visits and hospitalization). They were asked how their physical and emotional problems affected their daily lives. SMs were also asked if they were physically hurt during deployment and if so, whether that wound, assault, or injury was still resulting in problems. Finally, SMs were asked if they had a current health concern or condition related to deployment.

For analysis, this construct included questions 1, 2, 3, 4, 5, 6, and 7a for the PDHA and questions 1, 2, 3, 4, 5, 6, 7a, and 8 for the PDHRA.

### ***Current Physical Health Problems***

This group consisted of the items in question 8a on the PDHRA self-report. As a gateway question, SMs were asked if they had any current health concerns or conditions related to deployment. If answered positively, the SM indicated the presence or absence of 24 separate concerns or conditions. Note the gateway question (question 8 on the SM self-report) is included in the physical health status group described above.

For the PDHA, this group consisted of the items in question 8 of the self-report. SMs were asked to indicate whether they saw a healthcare clinician, were placed on quarters or given light/limited duty, and whether they were still bothered by 25 separate concerns or conditions.

After psychometrics were conducted, all items in question 8a for the PDHRA remained in the scale for analysis except for ‘fever,’ ‘cough lasting more than 3 weeks,’ ‘skin diseases or rashes,’ and ‘other.’ For the PDHA, only concerns that still bothered the SMs were used in analysis, with the exception of ‘fever,’ ‘vomiting,’ ‘skin diseases or rashes,’ and ‘other.’

### ***Traumatic Brain Injury (TBI)***

This group consisted of questions 9a through 9d on the PDHA and PDHRA self-report. SMs reported whether they experienced any events that could have resulted in head trauma and the repercussions of the event immediately after it happened. SMs were also asked if they had any problems such as memory lapses or headaches after the event and in the past week.

The Air Force User’s Guide guidelines for determining a positive response for TBI concerns suggested that only 9d should be used. The guideline was modified slightly because there was a large amount of missing data for question 9d, which significantly decreased the sample size for analysis. To decrease the amount of missing data, responses in 9d were changed to ‘no’ when the responses in 9a were also ‘no.’ Instead of using the created psychometrics scale; the Air Force guidelines were used to create this construct for both the PDHA and the PDHRA.

### ***Exposure Concerns***

This group consisted of questions 10 through 10a on the PDHRA self-report. As a gateway question, SMs were asked if they had any persistent major concerns regarding the health effects of something they may have been exposed to or encountered while deployed. If positive, the SM indicated the presence or absence of 24 separate exposure concerns. For analyses, the gateway question was not included in the scale due to redundancy.

For the PDHA, this group of items consisted of questions 16 through 20. As in the PDHRA, SMs were asked if they had any persistent major concerns regarding the health effects of something they may have been exposed to or encountered while deployed. They were asked to indicate the presence or absence of 24 separate exposure concerns. They were also asked three additional questions addressing exposure to hazards that required immediate medical care, entering or inspecting destroyed military vehicles, exposure to chemical, biological, or radiological warfare, and exposure to infectious diseases.

All items in the PDHRA question 10a remained in the final exposure concerns scale, with the exception of ‘animal bites,’ ‘chlorine gas,’ ‘depleted uranium,’ ‘ionizing radiation,’ and ‘other

exposures to toxic chemicals or materials, such as ammonia, nitric acid, etc.’ All items in the PDHA question 16 remained in the final exposure concerns scale, with the exception of ‘animal bites,’ ‘chlorine gas,’ depleted uranium,’ ‘ionizing radiation,’ and ‘other exposures to toxic chemicals or materials, such as ammonia, nitric acid, etc.’ In addition, question 19 was retained while questions 17, 18, and 20 were dropped from the scale.

### ***Relationship Conflicts***

Relationship conflicts consisted of question 11 on the PDHRA. SMs were asked whether they had serious conflicts with spouse, family, friends, or at work since return from deployment. This question was not asked on the PDHA.

### ***PTSD Symptoms***

This group consisted of questions 13a through 13d on the PDHA and 12a through 12d on the PDHRA. On both the PDHA and the PDHRA, SMs were asked whether they had ever had an experience that was so frightening that they had nightmares about it, tried to avoid thinking about it, were always on guard, or felt detached from others.

All items were retained in the final PTSD scale for the PDHRA. Items 13c and 13d were dropped from the PTSD scale for the PDHA.

### ***Alcohol Use***

This group consisted of questions 15a through 15d on the PDHA and 13a through 13d on the PDHRA. On both forms, SMs were asked whether they drank alcohol more than they intended and whether they wanted or needed to cut down on drinking. They were also asked to indicate how often they drank and the frequency of drinks consumed.

According to Air Force guidelines (Appendix J), a potential alcohol problem was present when the SM responded ‘yes’ to either a or b or if their scores for c, d, and e (ranging from 0-4 for each question) were greater than 3 for men or greater than 2 for women. This algorithm was used to create a positive alcohol scale score on the PDHA and PDHRA.

### ***Depressive Symptoms***

This group was made up of questions 14a and 14b on both the PDHA and the PDHRA. SMs were asked to indicate how often they were bothered by having little interest in doing things and feeling down or hopeless. Responses ranged from “not at all” to “nearly every day.”

For the PDHA and PDHRA, both items remained in the construct for analysis.

### ***Support and Assistance Requests***

This group consisted of questions 15 through 18 on the PDHRA self-report and 24 through 27 on the PDHA self-report. On both forms, SMs could request support for several problems, including requesting a visit to a healthcare clinician, receiving information or assistance for a stress, emotional, or alcohol concern, receiving assistance for a family or relationship concern, and scheduling a visit with a chaplain or community support counselor.

### ***Overall PDHRA/PDHA***

For both the PDHA and the PDHRA, these overall scales were created by counting the presence of each of the SM constructs (see section ‘Scoring Individual SM Self-report Items as Positive or Negative’ above to determine how positives and negatives were created for each item).

### ***Clinician Risk Questions***

There are two behavioral risk questions that the clinicians are required to ask the SM directly. On the clinician portion of the PDHA and PDHRA, these are questions 3a and 3b and questions 2a and 2b, respectively. On both forms, SMs were asked if they had been bothered by thoughts that they would be better off dead or if they thought about hurting themselves in the past month, as well as the frequency of these thoughts. On the PDHA, SMs were asked if they had thoughts or concerns that they might harm or lose control with someone *during the past month*. On the PDHRA, SMs were asked if they had thoughts or concerns that they might harm or lose control with someone *since return from deployment*. These items were not grouped, but were instead analyzed individually.

### ***Clinician Risk Assessment***

This section consisted of questions 3a, 3b, 4, and 5 on the clinician portion of the PDHRA and questions 4a, 4b, 5, and 7 on the clinician portion of the PDHA. On both the PDHA and PDHRA, clinicians were asked if the SM posed a current risk for harm to themselves or others. Clinicians also indicated their outcome of the risk assessment; that is, whether a routine, immediate, or no referral was indicated. Clinicians were also asked to document the SM’s evidence of and referral for both potential alcohol and TBI problems. Each of these items was analyzed individually.

### ***Major Clinician Concerns***

Clinicians were asked to indicate the concerns they had about the SMs’ health. On question 11 of the PDHA, they were asked to indicate whether they had minor or major concerns for the following: physical symptoms, exposure symptoms, environmental, occupational, combat or mission-related, depression symptoms, PTSD symptoms, anger/aggression, suicidal ideation, social/family conflict, alcohol use, and other. On question 7 of the PDHRA, they were asked to indicate whether they had minor or major concerns for the following: physical symptoms, exposure symptoms, depression symptoms, PTSD symptoms, anger/aggression, suicidal ideation, social/family conflict, alcohol use, and other. For analysis, only major concerns were considered. Each major concern was analyzed individually, as well as the sum of all major concerns.

### ***Referrals***

Clinicians were asked to indicate referrals on question 12 of the clinician portion of the PDHA and question 8 of the clinician portion of the PDHRA. Referrals were grouped into the following categories for analysis for both the PDHA and the PDHRA:

*Any referral.* The group was created by summing the indications of all referral types, including non-medical, plus the indication of declining a referral. Sometimes the clinician indicated that a referral was declined (PDHA clinician question 14 and PDHRA clinician question 11), but no referral was indicated; thus, a referral was assumed.

*Any medical referral.* This group was created by summing the indications of the following referrals: (a) Primary Care, Family Practice; (b) Behavioral Health in Primary Care ; (c) Mental Health Specialty Care; (d) Audiology; (d) Cardiology; (d) Dentistry; (d) Dermatology; (d) ENT; (d) GI; (d) Internal Medicine; (d) Neurology; (d) OB/GYN; (d) Ophthalmology; (d) Optometry; (d) Orthopedics; (d) Pulmonology; and (d) Urology.

*Primary care referral.* Question 12a on the clinician portion of the PDHA and question 8a on the clinician portion of the PDHRA were analyzed individually.

*Behavioral care referral.* This group was created by summing the indications of the following: Behavioral Health in Primary Care (b) and Mental Health Specialty Care (c).

*Specialty physical care referral.* This group was created by summing the indications of the following referrals for question 12d on the PDHA and question 8d on the PDHRA: Audiology; Cardiology; Dentistry; Dermatology; ENT; GI; Internal Medicine; Neurology; OB/GYN; Ophthalmology; Optometry; Orthopedics; Pulmonology; and Urology.

*Military OneSource referral.* Question 12j on the clinician portion of the PDHA and question 8j on the clinician portion of the PDHRA were analyzed individually.

*Other non-medical referral.* This group was created by summing the indications of the following referrals: (e) Case Manager, Care Manager; (f) Substance Abuse Program; (g) Health Promotion, Health Education; (h) Chaplain; (i) Family Support, Community Service; and (k) Other.

*Declination of referral.* Clinician's could indicate that the SM declined a referral on question 14 on the clinician portion of the PDHA and question 11 on the clinician portion of the PDHRA.

### **Service Member Characteristics**

There are several SM-related characteristics that could have a direct or indirect influence on the outcomes of interest in this report. Because no randomization occurred in this evaluation, certain SM characteristics were statistically controlled for in analyses in an attempt to create equivalent groups for comparison. See Table 3.4 for descriptive statistics of the SM characteristics.

*Cohort.* Conditions of war during SMs' deployments varied over time; therefore, date of departure from theater was used to group SMs by their war experience. The following groups were created: SMs departing between 2001 and 2004, SMs departing in 2005, 2006, 2007, 2008 quarter 1, 2008 quarter 2, 2008 quarter 3, 2008 quarter 4, and 2009.

*Time between departure from theater and PDHRA.* The number of days between departure from theater and PDHRA completion varied greatly for SMs. Concerns could be addressed and/or problems could arise with time, so we sought to control for the effect of time.

**Table 3. 4. SM characteristics for all January 2008 PDHRAs accounted for in analysis**

	SMs deployed to OIF/OEF
	N=195,262
<b>Cohort</b>	
SMs departing theater 2001-2004	3%
SMs departing theater 2005	4%
SMs departing theater 2006	4%
SMs departing theater 2007	14%
SMs departing theater 2008 Quarter 1	17%
SMs departing theater 2008 Quarter 2	28%
SMs departing theater 2008 Quarter 3	16%
SMs departing theater 2008 Quarter 4 and 2009	14%
<b>Time between departure from theater and PDHRA (months)</b>	
Mean	8.91
Standard deviation	11.02
Range	0-95.38
<b>Service Branch and component</b>	
Army Active	39%
Army Reserve	8%
Army National Guard	13%
Air Force Active	12%
Air Force Reserve	1%
Air National Guard	3%
Navy Active	4%
Navy Reserve	2%
Marine Active	15%
Marine Forces Reserve	2%
<b>Combat exposure</b>	
Perceived combat exposure	39%
No perceived combat exposure	35%
Combat exposure missing	1%
Combat exposure not applicable	26%
<b>Deployment location</b>	
Iraq	83%
Afghanistan	16%
Both Iraq and Afghanistan	2%
<b>SM Total Problems</b>	
Mean	2.44
Standard deviation	2.23
Range	9

*Branch and component.* SMs may differ depending on their Service Branch and component. These differences were accounted for by controlling for Branch and component.

*Combat exposure.* The degree to which SMs were exposed to combat during deployment varies due to many factors (conditions of war, deployment location, etc); thus, perceived combat exposure was accounted for in analysis. See Appendix I for a complete description of the creation of the combat exposure variable.

*Deployment location.* War conditions are potentially different for SMs who are deployed to either Iraq or Afghanistan or both. These differences were accounted for in analysis.

*SM problems.* Because the complexity of SMs' problems could affect how the clinicians perceived the SMs, the number of problem areas was accounted for when analyzing clinician reported constructs.

### **Final Sample for Analysis**

See Appendix I for a detailed explanation of the preparation of the data. The final sample for analysis consisted of 192,201 de-identified PDHAs and 195,262 de-identified PDHRAs. Each PDHA and PDHRA represents a single SM who deployed to either Iraq or Afghanistan. In addition, 21,166,398 de-identified health encounter records were received. See Appendix M for descriptive statistics for every item on the PDHA and PDHRA for the following locations: Iraq, Afghanistan, Both Iraq and Afghanistan, Kuwait, Qatar, and all other locations. For descriptive statistics on every item on the PDHA and PDHRA by Branch and component for SMs who deployed to Iraq or Afghanistan, see Appendix N.

## **Chapter 4: SM Self-reported Comorbidity and PDHRA Medical Referrals are Key Factors in Predicting Subsequent Health Care Utilization**

### ***Introduction***

#### **Background and Significance**

The underlying goal of the DD Form 2900, or Post-Deployment Health Reassessment (PDHRA), is to increase Service members' (SMs) access to appropriate care. SMs complete the self-report section of the form and then meet with a clinician (health care provider) who reviews the self-report, conducts a risk assessment, and evaluates whether to refer the SM for additional evaluation. The first section of this chapter seeks to explore how different sections of the PDHRA relate to each other, and the relationship between SM comorbidity (number of different problem areas) and clinicians' risk assessment, major concerns and referrals. The second section of this chapter explores SMs' health care utilization after the PDHRA.

#### **Objective**

The overall objective of this chapter is to explore how the PDHRA works by exploring the relationship between SM and clinician sections of the form (section 1), and the SMs' subsequent health care utilization (section 2). We seek to understand how well the PDHRA process accomplishes the goal of increasing SMs' access to appropriate care.

#### **Study Design and Aims**

By examining the relationship of self-reported problems to the clinician's risk assessment, concerns, and referrals, and then to health care encounters, we can understand more about what problems or patterns of problems generate referrals, and how the number of SMs' health care encounters are affected by the PDHRA process.

### ***Methods***

#### **Data Sources**

The 2008 version of DD Form 2900 and HCE data were used, as described in detail in Appendix I.

#### **Study Population**

For section 1, the total number of DD Form 2900s (one per SM) was 195,262. For section 2, analyses using HCE data, only Active component SMs were included (N = 137,039). Please see Appendix I for a complete description of the study population.

#### **Analyses – Section 1: Relationship Between SM Self-report and Clinician-report Sections of the PDHRA**

In the first section of this chapter we examine the relationship between the SM-self report and clinician risk assessment, concerns and referrals. Correlations were computed as a preliminary

step, followed by more sophisticated regression analyses. According to Cohen (Cohen, 1988, 1992), correlations of about 0.1 are considered small; 0.3 are considered moderate; and 0.5 are considered large.

A general linear model was used to determine how all sections of the PDHRA explain the total number of medical referrals. A Poisson distribution was used to manage the large number of zeros in the dependent variable (Long, 1997). The dependent variable was the total number of medical referrals and the independent variables were total number of SM reported problems, SM responses to clinicians' risk assessment questions, clinicians' judgment on risk assessment items, and clinicians' major concerns. In addition, SM characteristics (cohort, Service Branch and component, combat exposure, deployment location, and time between departure from theater and PDHRA as described in Chapter 3) were controlled for in the analyses as covariates.

A second approach used a logistic regression model to determine how SM and clinician responses in the PDHRA predicted the likelihood of receiving a medical referral. The dependent variable (receiving any medical referral) was predicted by the same independent variables as above: total number of SM reported problems, SM responses to clinicians' risk assessment questions, clinicians' judgment on risk assessment items, and clinicians' major concerns. SM characteristics were also controlled for in this analysis.

## ***Results – Section 1***

### **SMs' Endorsement of at Least One Problem Area Does Not Correlate With Medical Referrals**

In the PDHRA, 22% of Active and Reserve SMs reported zero problem types and were not issued a medical referral by the clinician. Almost as many (18%) SMs reported at least one problem and received at least one medical referral. There is, however, a large group of SMs (59% of Active and Reserve) who reported at least one problem type but was not issued a medical referral (see Table 4.1 for the categorization of all groups). Thus, it is not surprising that the correlation between SM problems (any) and clinician's medical referral (any) is only 0.24 (N=195,262 Active and Reserve SMs), which is a weak positive correlation. For only Active SMs the correlation was also weak ( $r=0.22$ ,  $p=0.001$ ).

**Table 4. 1. The percentage of SMs with/without any problem and with/without any medical referral**

	<b>Active &amp; Reserve</b>	<b>Active Only</b>
No SM problems - No medical referral	22%	24%
No SM problems – Yes medical referral	0.34%	0.43%
Yes SM problems – Yes medical referral	18%	15%
Yes SM problems - No medical referral	59%	60%
<b>Total sample</b>	<b>195,262</b>	<b>137,039</b>
<b>Phi coefficient (any problem &amp; any medical referral)</b>	<b>0.24</b>	<b>0.22</b>

## **More Comorbidity of Problem Areas is Positively Correlated With Medical Referrals**

SMs who reported problems and received a medical referral (N=36,074 SMs, 18% of total sample) on average endorsed 4.5 problem areas (SD =2.01, range 1-9 problems). Two percent reported thinking about harming themselves, 8% reported thinking of harming others, 8% reported having conflicts with their family members, and in 0.53% of these cases (N=191 out of 36,074 SMs), the clinician documented a major concern about the SM's suicidal thoughts. Less than half (44%) of SMs had one or more major concerns documented by the clinician. Twelve percent also received a non-medical referral and 11% received referrals to Military OneSource (referral categories are not exclusive, i.e., SMs with medical referrals could also receive a non-medical and/or Military OneSource referral; Military OneSource referrals were considered uniquely, i.e., separate from non-medical and medical referrals).

SMs who reported problems but did not receive a medical referral (N=115,177 SMs, 59% of total sample) reported less comorbidity (mean=2.73, SD=1.85, range 1-9 type of problems) than those receiving a medical referral. One percent reported thinking about harming themselves, 2% reported thinking of harming others, and in 0.14% of these cases (N=165 out of 115,177 SMs) the clinician documented a major concern about the SM's suicidal thoughts<sup>1</sup>. Only 14% of clinicians documented one or more major concerns. Although no medical referrals were issued, 6% received a non-medical referral and 2% were referred to Military OneSource (referral categories are not exclusive).

Clinicians documented similar rates of already being under care for any concern for SMs who reported a problem regardless of whether or not they were referred. Thirty percent of those receiving a medical referral were already under care and 25% of those not receiving a medical referral were also already under care. Since the two groups were similarly likely to be already under care, this factor does not help explain the difference in receiving a medical referral. On the other hand, documentation of not being under care for any concern differed substantially for SMs reporting problems on the PDHRA (61% who received a medical referral and 19% who did not). It is likely that the lower rate for those not under care is related to fewer concerns; however, there is no way to confirm this since documentation of care is usually only recorded where a concern is noted.

See Appendix O for complete descriptive statistics of SMs who reported problems and received a medical referral and SMs who reported problems but did not receive a medical referral. The appendix provides information for Active & Reserve SMs and Active Only.

## **SMs With Complex Comorbidity of Problem Areas Receive More Medical Referrals**

There is a stronger relationship between SM-reported problems and medical referrals when the total number of SM reported problem areas is considered. Table 4.2 shows that the correlation (Phi coefficient or  $\phi$ ) between SM total number of problem areas (e.g., exposure, physical health,

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<sup>1</sup> It is possible that clinicians noted in a text field why no referral was given despite the clinician's documentation of concern about suicidality. These text fields were not available to VU for analysis.

TBI; see Chapter 3 for a complete list of problem areas) and the issuance of any medical referral was moderate ( $\phi=0.43$ ,  $p=0.001$ ). The correlation increases only slightly with total number of medical referrals or clinician major concerns.

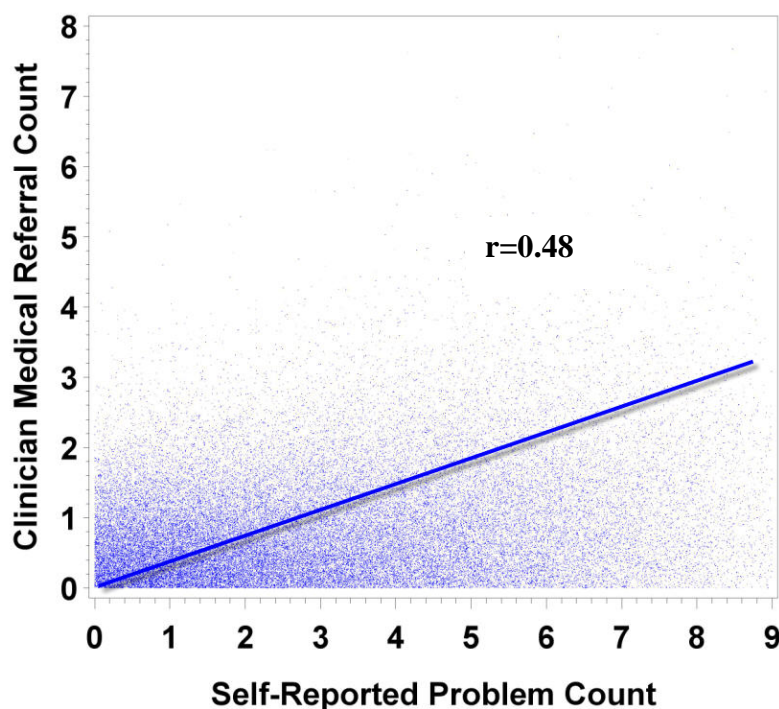
**Table 4. 2. Correlations between the number of SM-reported problem areas endorsed and clinicians' medical referral and major concerns**

	SM-reported Problems (Active & Reserve)	SM-reported Problems (Active Only)
Any medical referrals	<b>0.43</b>	<b>0.39</b>
Total number of medical referrals	<b>0.48</b>	<b>0.44</b>
Total number of clinician major concerns	<b>0.49</b>	<b>0.43</b>

*Note: all correlations were statistically significant at  $p<0.001$*

The figure below graphically shows the positive correlation found between the number of problem areas endorsed and the number of medical referrals given. This moderate to large correlation suggests that SMs with complex comorbidity receive more medical referrals.

**Figure 4. 1. Correlation between SM total reported problems and clinicians' total medical referrals (N=195,262, Active and Reserve)**



Fitting a linear regression model between the total count of SM problem areas and the count of clinicians' medical referrals (without controlling for any other covariates), the count of SM problems explains 20% of the variance in the count of medical referrals ( $R\text{-square}=0.20$ ), which is substantial. However, this result also means that there are other factors, such as the clinicians' risk assessment, SM characteristics, whether the SM is already under care, or other unknown factors that explain the remaining 80% of the variance. A separate linear regression model was

also fit between clinician total major concerns and clinician medical referrals. Clinicians' major concerns on their own explained 12% of the variance of total medical referrals (without controlling for any other factor).

### **Modifications to Alcohol use and TBI Screening Questions Do Not Lead to Changes in Associated Referral Rates**

The complexity of exploring the relationship between components within the PDHRA is highlighted by examining how changes between the 2005 and 2008 versions affect positive screening and referrals rates. The 2008 version of the PDHRA was updated from the 2005 version to include three additional alcohol questions (question 13c-e) and a new section of four questions (9a-d) designed to identify potential cases of traumatic brain injury (TBI). We explored whether these changes lead to corresponding changes in positive screenings and referral rates. The results are discussed briefly here, and a complete discussion is presented in Appendix P.

The additional alcohol questions on the 2008 version greatly increased the percentage of SMs screening positive for alcohol (42.4%; see Appendix P for definition of positive screening) on the 2008 version--nearly a fourfold increase in positive screenings compared to the 2005 version. However, clinician-reported major alcohol concerns and substance abuse referrals were very similar and low (< 2%) on both the 2005 and 2008 versions. If clinician judgment is taken as a criterion, then the percentage of clinician concerns about alcohol and referrals to a substance abuse program supports the hypothesis that the new form is over-identifying alcohol problems

With the addition of the new TBI questions, 14% of SMs self-reported TBI symptoms on the 2008 version. Because there were no questions specific to TBI on the 2005 version of the PDHRA, we examined whether there were any differences in a range of related concerns, including physical, PTSD, and depressive symptoms. Compared to the 2005 version, fewer SMs reported physical, PTSD, or depressive symptoms on the 2008 PDHRA, but clinician concerns for these areas were very similar. The overall rate of referrals decreased when comparing SMs who completed the 2008 version compared to the 2005 version. The reason for this decrease is unclear. It could be due to differences between versions, or due to some other factor such as differences in the level or severity of combat operations over time. In summary, the additional TBI questions in the 2008 version of the PDHRA did not increase overall referral rates.

### **The Probability of a Medical Referral is Best Predicted by SM Self-reported Problems, but Clinicians' Risk Assessment and Concerns Also Play a Role**

Next, the general linear model was used to predict total number of medical referrals from SM and clinician responses, while controlling for SM characteristics (see Analyses). Table 4.3 shows the results of the general linear model. As before, SM total self-reported problems by themselves explain 20% of the variance in the total number of medical referrals. When both SM and clinician responses in the PDHRA were included, 27% of the variance was explained, which is a 35% increase in the explanatory power of the model. Since this was not an experimental design where some SMs would be issued medical referrals based on the self-report only (e.g., using an algorithm to determine referrals rather than a clinician), we cannot untangle the separate contributions of the clinician interview and SM self-report. In these data, clinicians' major concerns and SMs' reported problems had a correlation of 0.49 ( $p < 0.001$ ). Therefore, from the general linear model it can be concluded that the clinician's risk assessment and major concerns,

and SMs' responses and characteristics are important in determining medical referrals; altogether they explained 27% of the total variance in the number of medical referrals.

**Table 4. 3. Explaining the number of clinicians' medical referrals**

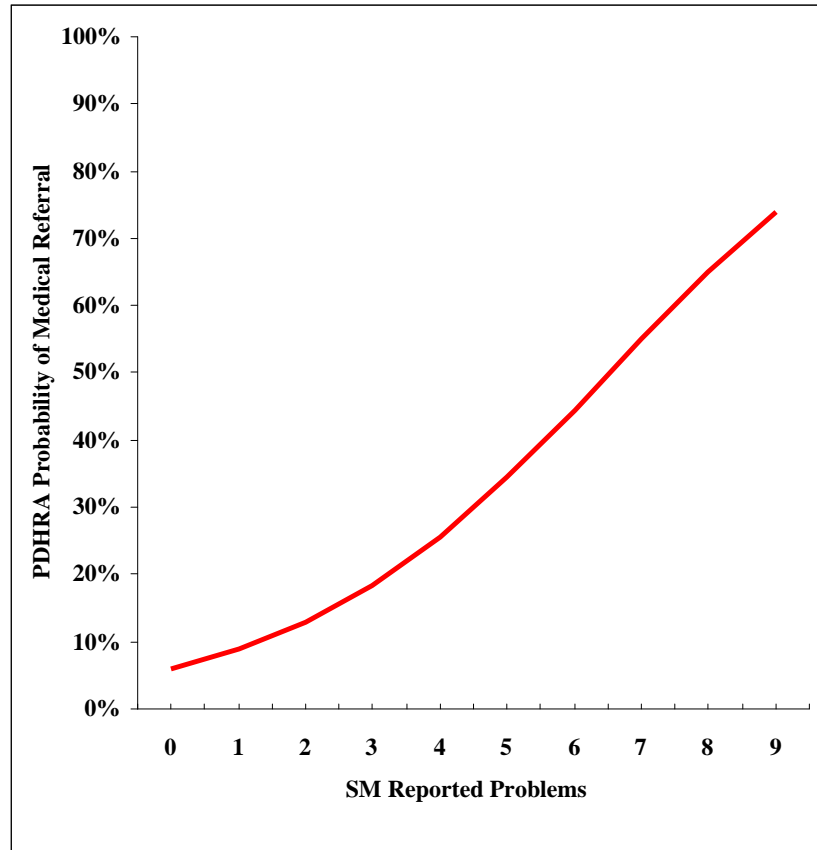
Independent Variables	Adjusted R-square	
	Active & Reserve	Active Only
Model 1: SM total number of problems areas	0.20	0.16
Model 2: SM total number of problem areas, SM characteristics, risk assessment, and clinicians' major concerns	0.27	0.23

*Notes: General linear models using a Poisson distribution*

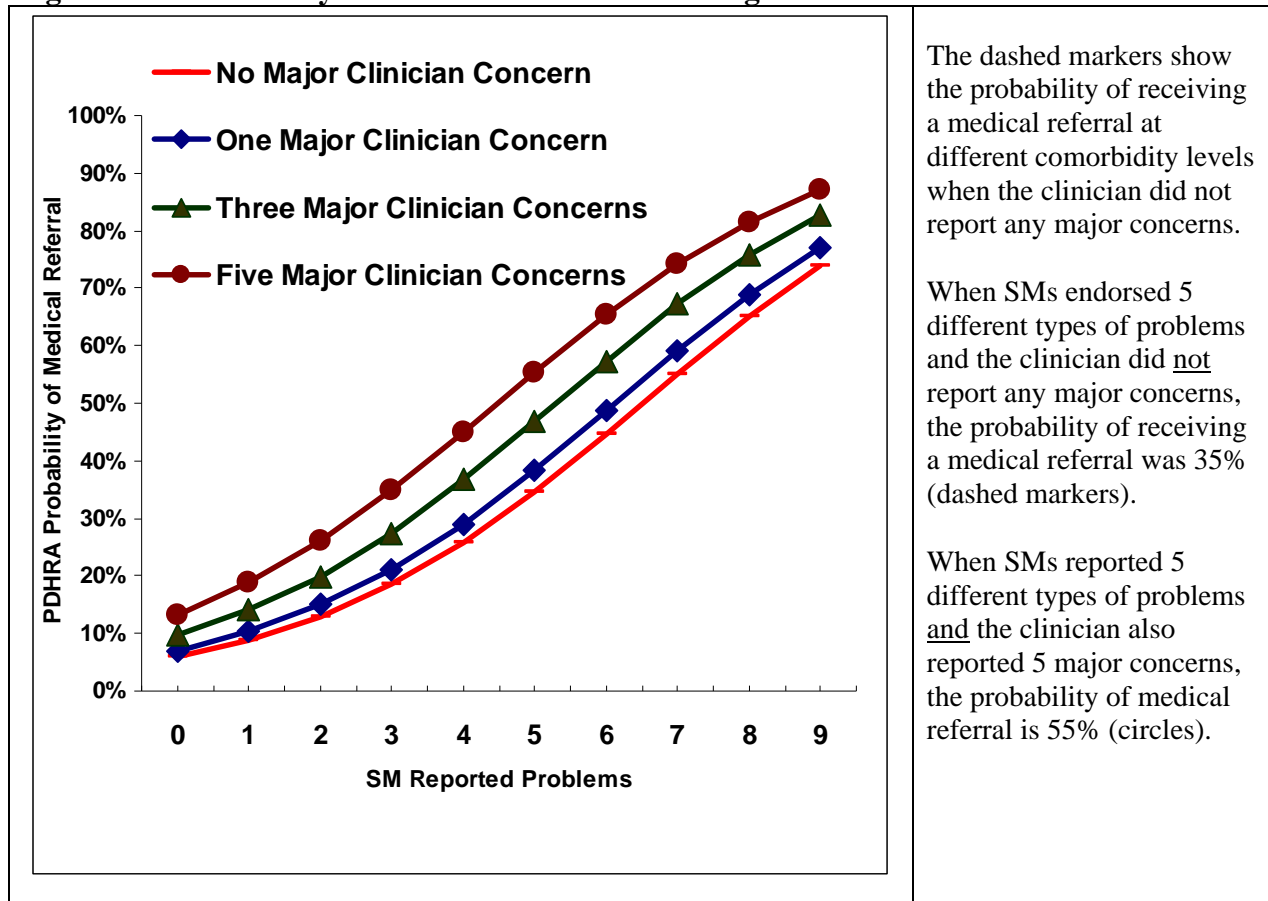
It should be noted that because many SMs were potentially interviewed by the same clinician, SMs are clustered within clinicians and clinicians are nested within sites; therefore, these observations are not independent. Future research should address the nesting nature of the DOD data using hierarchical linear models (HLM). HLM or multi-level analysis is widely used in the behavioral, social, and educational fields where predictor variables are measured at more than one level (Singer & Willett, 2003). However, the dataset obtained from DoD in the current analysis did not include identification at the level of the provider or base/post and thus these more appropriate analyses could not be conducted.

A logistic regression model was used to explain the contribution that SM reported problems and clinician risk assessment and major concerns have when predicting medical referrals. A model was estimated predicting medical referrals from SM reported problems, clinician risk questions (SM response to interview questions about harm to self or others), clinician risk assessment, clinician major concerns, and SM characteristics. The main results from this model estimation are presented below.

Figure 4.2 shows that the probability of receiving a medical referral increases with SM comorbidity. The positive slope indicates that SMs with more problems are more likely to receive a medical referral (odds ratio 1.63,  $p = .0001$ ).

**Figure 4. 2. Probability of any medical referral by SM comorbidity of problems**

Furthermore, the probability of receiving a medical referral changed with the SMs' comorbidity of problem areas when the actual number of clinician concerns was considered. Figure 4.3 below shows that as the number of clinician major concerns increases, the probability of medical referral goes up at each level of SM comorbidity (note that clinician risk questions and clinician risk assessment were included as predictors here, as well). This suggests that clinician risk assessment and concerns have a small but additional value when determining the probability of a medical referral.

**Figure 4. 3. Probability of medical referral at differing levels of clinician concerns**

This indicates that the SM self-report seems to be the major determinant of receiving a medical referral, but there is also a small addition from clinician major concerns.

## **Results – Section 2**

### **Analyses – SM Health Care Encounters After the PDHRA**

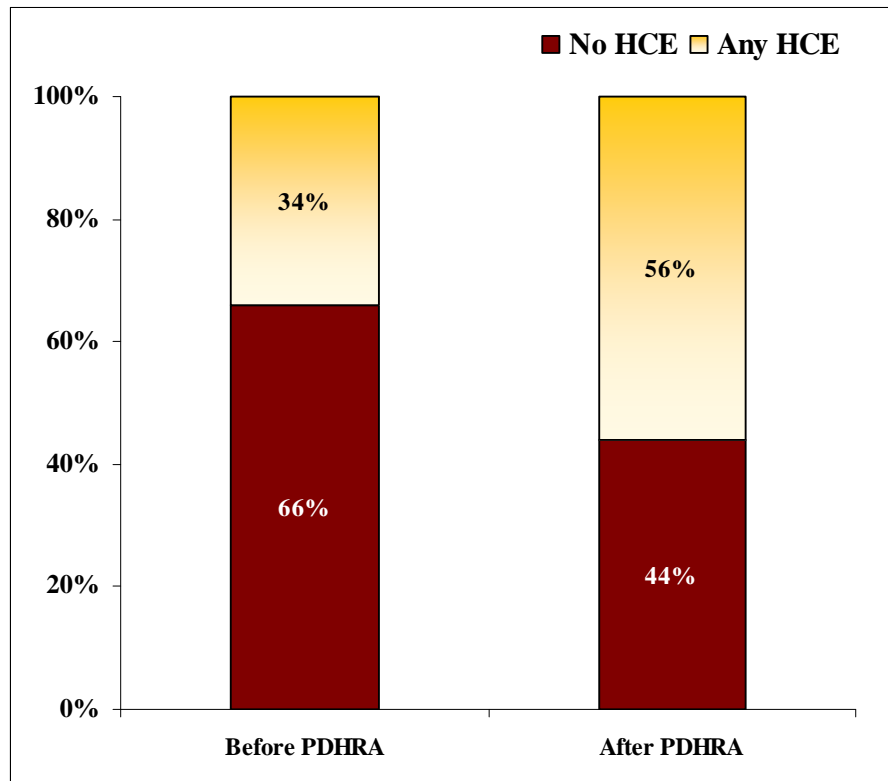
This section examines active duty SMs' health care encounters (HCE) after completion of the PDHRA. The PDHRA data were combined in one data set with the total number of HCEs that SMs had in the six weeks prior to the PDHRA and the six weeks after completing the PDHRA.

This analysis was done in three steps. First, the mean numbers of health care encounters before and after the PDHRA were compared. Second, the relationship between medical referrals issued during the PDHRA process and the number of health care encounters was examined. Third, multiple regression analyses were conducted to determine the main factors predicting health care use after the PDHRA. The regression analyses measured the partial contribution of each section of the PDHRA (SM self-report problems and risk questions plus clinician's risk assessment, major concerns and medical referrals) while also controlling for health care encounters before the PDHRA and SM characteristics. Because the median and mode of the dependent variable (HCEs after the PDHRA) were zero, a Poisson distribution was used (Long, 1997).

### A Larger Proportion of SMs had More Health Care Encounters After the PDHRA

A significant minority (34%) of Active duty SMs had at least one HCE before the PDHRA and more than half (56%) of SMs had at least one HCE within six weeks after the PDHRA (shown in Figure 4.4 below). Of those SMs who had at least one HCE before the PDHRA, 68% also had a HCE after the PDHRA. The correlation between having at least one HCE before and at least one HCE after was 0.17 ( $p=0.001$ ), a weak effect.

**Figure 4. 4. Proportion of SMs with and without HCE six weeks before/after the PDHRA**

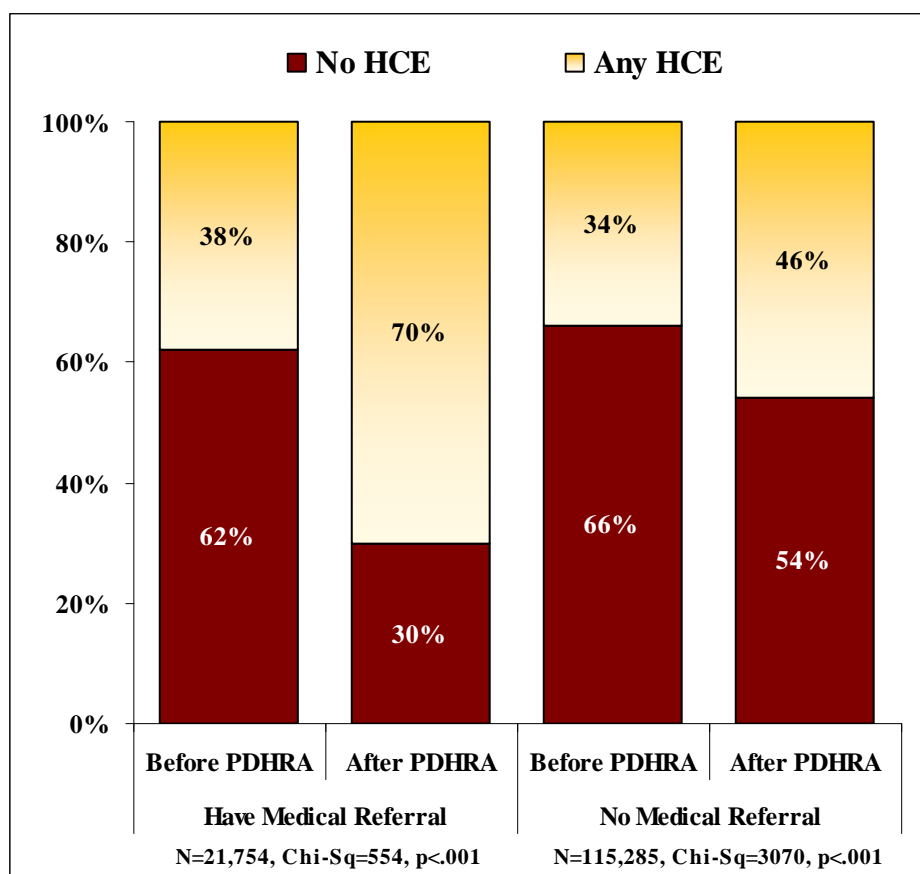


*Note: N=137,039 SMs, Chi-Square = 3736  $p<0.001$*

On average, Active Duty SMs had about one HCE during the six weeks prior to the PDHRA (mean=0.93, SD=2.08, range 0-50) and 1.50 HCEs (SD=2.53, range 0-94) within the six weeks after the PDHRA. Therefore, HCEs increased approximately 50% after the PDHRA ( $p<0.001$ ). The correlation between the total number of HCEs before and after was 0.36 ( $p<0.001$ ), a moderate correlation.

### SMs Receiving Medical Referrals had More Health Care After the PDHRA

The contribution of the PDHRA in increasing HCE was more evident when HCE for SMs receiving and not receiving a medical referral were compared. Figure 4.5 below shows that 70% of SMs receiving medical referrals had a HCE after the PDHRA, compared to 46% of SMs not receiving a medical referral. SMs not receiving a medical referral had an average of 0.45 more HCEs after the PDHRA. The change was even higher for SMs receiving a medical referral (average of 1.18 more,  $p<0.001$ ). Thus, even though HCEs appeared to increase for all Active duty SMs after the PDHRA regardless of whether a medical referral was received, the increase was significantly larger with a medical referral.

**Figure 4. 5. HCE for SMs with/without medical referrals**

### **Previous HCE and Medical Referrals are Key Factors Predicting HCE After the PDHRA**

Three multiple regression models were estimated. The first model examined how well health care encounters prior to the PDHRA predicted health care after the PDHRA. This model tested the hypothesis that SMs having HCE before the PDHRA are more likely to have a HCE after the PDHRA. This model essentially controls for SMs' differences in their need or preference for HCE previous to the PDHRA. The second model built on the first model by estimating the additional impact of SM comorbidity on HCE after the PDHRA (while controlling for previous HCE). This second model tested the hypothesis that SMs with greater comorbidity receive more health care after the PDHRA. The third model controlled for HCEs prior to the PDHRA, SMs' comorbidity, other SM characteristics (such as location, cohort, combat exposures, etc.), and the clinician's risk assessment, major concerns, and medical referrals, to determine how well each one of these factors predicts HCE after the PDHRA.

The results of all three models are presented in Table 4.4. The first model indicates that previous HCE explained 13% of the variance in the total number of HCE after the PDHRA; the second model explained 17% of the variance, which means that when SM comorbidity is included in the analysis, the adjusted r-square goes up by 31% (.17-.13/.13). This finding suggests that SMs with more problems receive more health care after the PDHRA, even when controlling for previous health care. The more complex model, model 3, controlled for SM characteristics, SM and

clinician PDHRA responses, and previous HCE and explained 22% of the variance of total number of HCE after the PDHRA. The main findings of the multiple regression estimation are as follows: 1) more complex cases (SMs endorsing more problem areas) receive more health care after the PDHRA; 2) SMs receiving health care services prior to the PDHRA are also more likely to receive healthcare after the PDHRA; 3) SMs receiving medical referrals get more health care after the PDHRA.

**Table 4. 4. Results of multiple regression models**

**Dependent variable: Number of HCE after PDHRA (N=137,039 SMs)**

Models (Independent Variables Included in Each Model)	Adj R <sup>2</sup>	Main Findings
Model 1: HCE before PDHRA	0.13	The more HCE SMs had prior to the PDHRA, the more HCEs they have after the PDHRA.
Model 2: HCE before and SM comorbidity	0.17	SMs with higher comorbidity have more HCE after the PDHRA (controlling for previous HCE).  The more HCE SMs had before the PDHRA, the more they will have after the PDHRA (when controlling for SM comorbidity).
Model 3: SM comorbidity, SM characteristics, SM risk, clinicians' assessment and Major concerns, and clinicians' medical referral	0.22	SMs receiving medical referrals have more HCE after the PDHRA (when controlling for HCE before PDHRA, SM Comorbidity, SM characteristics, and clinician PDHRA responses)

*Note: The median and mode of dependent variable were zero and therefore all regression models used a Poisson distribution*

## Conclusions

The probability of a medical referral is best predicted by the number of SM self-reported problems, but the clinicians' risk assessment and concerns have additional predictive value. A majority of SMs (59%) reported some type of problem but did not receive a medical referral. But, compared to SMs who did receive medical referrals (18%), these SMs endorsed fewer problems and their clinician assessments were less severe, which could explain why no referral was given. Note that regardless of whether a medical referral was given, SMs reporting problems are almost equally likely to be under care (30% with referrals vs. 25% without); which means this factor does not help explain the differences in receiving a medical referral. Despite this large group of SMs who had problems but were not given referrals, the number of problems was found to correlate ( $r = 0.48$ ) with the number of medical referrals which is a moderate to large correlation. In addition to the importance of SM reported problems, the clinicians' risk assessment and major concerns also play an important role in determining a medical referral. The probability of referral increases as the number of clinician major concerns increases and if the SM reports problems but is not already under care for any problem. Together, all of the sections of the PDHRA (while controlling for SM characteristics) explain 27% of the variance in the number of medical referrals.

Additional analyses were conducted with Active duty SMs to understand how the PDHRA process affects health care utilization. On average, HCEs increased 50% after the PDHRA was completed. This was explored further and it was found that the number of HCEs after the PDHRA was positively correlated with the number of HCEs before the PDHRA. Health care encounters increased for all SMs after the PDHRA, but the increase was significantly higher for SMs who received a medical referral and for SMs with higher comorbidity. In this respect the PDHRA process is accomplishing its major purpose in increasing access to health care for SMs who have the most need for additional health services.

### **Relationship to Other Evaluation Findings**

In this chapter it was found that all the sections of the PDHRA working together accounted for 27% of the variance in referrals. Perhaps at least a portion of the remaining 73% of variance may be related to a lack of systematic approach in the interview itself. Chapter 9 found very little agreement over time in clinician concerns, risk assessment, and referrals when the SM had completed more than one PDHRA for the same deployment. This is in contrast to a rather consistent pattern of self-reporting of problems exhibited by SMs. Chapter 8 showed that clinician referrals varied by interview context (whether in-person or by telephone). In addition, through analysis of interview content and communication styles, chapter 7 suggests a great deal of variability in how clinicians approach the PDHRA interview. Notably, chapter 7 used more sophisticated multi-level analyses, accounting for the nesting of SMs within clinicians, which was not possible in any other analyses due to the lack of a provider identification variable in the datasets provided to VU. This strengthens the hypothesis that as a group, clinicians do not have a systematic approach to the interview. Furthermore, clinicians interviewed at active duty events, as reported in chapter 10, rarely reported receiving formal training specific to the PDHRA process or feedback about their performance.

It is clear that there is also a great deal of variability in the PDHRA process by Branch/component as well as among different installations with varied needs, resources, and standard protocols. In Chapter 6, small but significant differences were found in SM responses on VU's SM survey by location. Chapter 10 describes both observations and interviews with key personnel that suggest such site differences may influence how the PDHRA process works in a variety of ways.

### **Limitations and Directions for Future Research**

Future research should examine the type of services SMs receive after the PDHRA and how those services correlate with the type of PDHRA referral. Understanding the relationship between the type of referral and the health care received would allow greater confidence in the success of the PDHRA process in providing not just more care but more appropriate care. For example, if the clinician notes a major concern about depression, and the SM is referred for Primary Care, the HCE records could reveal not only if the SM had a HCE after the PDHRA, but whether there was a diagnosis of depression or related disorder. An analysis of the correspondence between ICD-9 codes and concerns and referrals on the PDHRA is also one way to assess if referrals from the PDHRA are appropriate. An appropriate referral could be operationalized as a subsequent HCE with an ICD-9 code related to the referral area. Inappropriate referrals would be those that do not result in a related ICD-9 code. Furthermore, HCEs could be examined to determine how often and in what time frame SMs seek health care

for issues for which they were not referred (but could have been) on the PDHRA. For example, an SM with no referral and no clinician concerns might still see a clinician for depression, perhaps indicating they did not fully disclose on the PDHRA. This analysis would not capture SMs who were in need of help, but did not receive a referral and did not seek health care. In addition to these secondary analysis strategies, it is also suggested that an informed and supported effort be made to follow-up with SMs and health care providers after to a HCE to assess their perception of the appropriateness of the referral and their satisfaction with the services provided.

Future research should also account for the clustering of SMs within clinicians and the clustering of clinicians within site. Site and clinician identification were not available for this evaluation, but the nesting of these data should be addressed in the future using hierarchical linear modeling.

## **Chapter 5: The Relationship Between the PDHA and the PDHRA**

### ***Introduction***

#### **Background and Significance**

The DD Forms 2796 and 2900, or Post-deployment Health Assessment (PDHA, Appendix F) and Post-deployment Health Reassessment (PDHRA, Appendix H) are both designed to address post-deployment health problems in Service members (SMs) returning from combat. The PDHA has been used since 2003 and is supposed to be administered within 30 days of return from deployment. The PDHRA, in use since 2005, is intended to be administered 90-180 days after returning. The PDHRA was implemented following concerns that certain health symptoms (e.g., relationship conflicts, depression) may not manifest immediately, but would take some time to develop and might therefore be missed by an early screening (Milliken et al., 2007). Both forms include a self-report completed by the SM, followed by an interview with a clinician who reviews the self-report, conducts a risk assessment, and makes a judgment about whether to refer the SM for further evaluation and treatment.

It is known that mental health concerns and referrals increase on the PDHRA compared to the PDHA (Milliken et al., 2007), but the full extent of the relationship between the two screenings remains to be explored. It is important to evaluate if there are systematic relationships between symptoms reported on the PDHA and PDHRA, and how health care between screenings (i.e., after the PDHA, but before the PDHRA) affects problems reported on the PDHRA.

#### **Objective**

This chapter explores the relationship between the self-report sections of the PDHA and PDHRA. Examining relationships among problems reported on the two forms offers an opportunity to understand what types of problems are more likely to be reported on one form vs. the other, and if some problems are likely to be reported on both forms. Clinician documented referrals on the PDHRA and SMs' health care encounters (HCE) after the PDHA may affect problems reported on the PDHRA and the likelihood of declining a referral on the PDHRA (i.e., if health care was already being received, a referral may not seem necessary), and these relationships are also explored. Finally, we explore how exposure to combat, as reported on the PDHA, is related to SM-reported problems on the PDHRA.

#### **Study Design and Aims**

Simple correlations and logistic regression analyses were used to address four aims: To determine (1) How problems reported in the PDHA predict problems reported in the PDHRA; (2) How HCE after the PDHA relates to problems reported on the PDHRA; (3) Whether receiving a medical referral at the time of the PDHA or health care between the administration of the forms predicted the declination of a referral at the time of the PDHRA; and (4) How perceived combat exposure as reported on the PDHA predicts problems reported on the PDHRA.

## Methods

### Data Sources

The analysis for this chapter is based on a sample of SMs who completed both a January 2008 version of the DD Form 2900 (PDHRA) and a January 2008 version of the DD Form 2796 (PDHA). To create the sample, the 251,089 de-identified PDHRA records were linked by DoD to the PDHA corresponding with the same SM and deployment. To ensure the highest number of matches, the full PDHA data set was used; that is, all 298,650 clean de-identified records were used in the matching process (see Appendix I ). The link was created by matching SMs' records where the date of departures were within 90 days of each other and the date of completion of the PDHRA was no earlier than the date of completion of the PDHA. If more than one PDHA corresponded to a PDHRA, then one PDHA was chosen randomly, creating a one-to-one match for every SM. Finally, SMs who deployed to operations other than OIF or OEF were removed from the data set for this analysis.

The resulting data set consisted of 67,541 SMs who were deployed for OIF or OEF and had both a 2008 PDHA and a 2008 PDHRA for the same deployment. Health care encounters for 54,062 Active duty SMs were also included in the data set. On average, the PDHA and the PDHRA were completed four months apart (mean=139 days, SD=38.6 days, range=0-415 days).

### Study Population

The number of records in the final data set by Service Branch and component are presented in Table 5.1. Each record represents a single SM.

**Table 5. 1. Number of SMs by Service Branch and component for final data set**

Service Branch and Component	N	Percent
Army Active	31,060	46.0%
Army Reserve	2,773	4.1%
Army National Guard	5,091	7.5%
Air Force Active	11,988	17.8%
Air Force Reserve	927	1.4%
Air National Guard	2,494	3.7%
Navy Active	2,233	3.3%
Navy Reserve	637	0.9%
Marine Active	8,781	13.0%
Marine Forces Reserve	1,557	2.3%
<b>Total</b>	<b>67,541</b>	<b>100%</b>

### Analyses

The PDHA and PDHRA SM self-reported scales (see Chapter 3) were the outcomes of interest for this study. Correlations were computed as a preliminary step in understanding the relationship between the self-report sections of the PDHA and the PDHRA. According to Cohen (1988, 1992), correlations of about 0.1 are considered small; 0.3 are considered moderate; and 0.5 are considered large. Logistic regression models were then estimated to examine if problems reported in the PDHA predict problems in the PDHRA. Odds ratios were obtained from these analyses to explain the odds of having a particular problem at the time of the PDHRA when it was present on the PDHA. SM characteristics (cohort, Service Branch and component, combat

exposure, deployment location, and time between departure from theater and PDHRA; (as described in Chapter 3) were controlled for in analysis. An additional model was estimated using Active Duty SMs only in order to also control for the number of health care encounters (HCE) between the PDHA and the PDHRA.

Logistic regression models were also estimated to determine whether receiving a medical referral at the time of the PDHA or health care between the forms predicted the declination of a referral at the time of the PDHRA. This model controlled for the SMs' comorbidity of problem types on the PDHRA, clinician major concerns, and SM characteristics.

A multiple regression model was estimated to determine if SMs receiving medical referrals on the PDHA received more health care after the PDHA. A Poisson distribution was used to handle the large number of zeros in the dependent variable (Long, 1997). The dependent variable was the number of health care encounters after the PDHA and independent variables were total number of SM reported problems, SM responses to clinicians' risk assessment questions, clinicians' judgment on risk assessment items, and clinicians' major concerns. In addition, SM characteristics were controlled for in analysis. Given the large sample size, most relationships were statistically significant. Effect sizes (ES) and odds ratios are better indicators of whether differences are meaningful by measuring the strength of the relationship between two variables. According to Cohen (1988, 1992), regression effect sizes of about 0.02 correspond to a small ES; 0.15 to a medium ES; and 0.35 to a large ES. The odds ratio represents the difference between two conditions as a ratio. An odds ratio much bigger or smaller than one indicates a large difference between groups. As a follow-up to the multiple regression model, a mediation model was estimated to examine the mediation effect of health care encounters. Mediation models explain how an effect occurs by hypothesizing a causal sequence (Lockwood & MacKinnon, 1998). Here the causal sequence is such that problems reported in the PDHA lead to health care encounters (the mediator), which in turn leads to the problems reported in the PDHRA.

Because this chapter included analyses of health care encounters (HCE), which were only available for Active duty SMs, results are presented for two groups – 1) all SMs and 2) active duty SMs.

## ***Results***

### **SM Self-reported Problems on the PDHA Predict SM Self-reported Problems on the PDHRA**

This section addresses the predictability of the SM self-report (SR) section of the PDHRA from the SM SR section of the PDHA. Table 5.2 shows the percentage of SMs endorsing symptoms in each problem area on the PDHA and the PDHRA. Because HCEs, which are only available for Active Duty SMs, are analyzed later in the chapter, the analyses in this section are computed for all SMs and for Active Duty SMs only.

**Table 5. 2. Percentage of SMs reporting each problem area**

	All SMs N=67,541		Active Only N=54,062	
	PDHA	PDHRA	PDHA	PDHRA
General health history	38%	53%	38%	51%
Physical health concerns	34%	27%	33%	24%
Exposure concerns	53%	21%	50%	19%
TBI symptoms	11%	11%	11%	11%
PTSD symptoms	9%	19%	10%	18%
Depressive symptoms	10%	9%	11%	9%
Potential alcohol problems	31%	42%	32%	42%
Requests for support	21%	16%	20%	14%
Overall PDHRA <sup>1</sup>	77%	73%	76%	72%

<sup>1</sup> This scale measures the number of problem areas (i.e., TBI, Physical, Exposure, Depression, etc.) endorsed by the SM in the self-report section. Please see Chapter 3 for a complete description of how this variable was constructed

Table 5.3 shows the percentage of SMs who reported a problem on the PDHRA after first reporting one on the PDHA. Eighty percent of SMs who reported any problem on the PDHA also reported a problem on the PDHRA. Seventy-seven percent of SMs had concerns about their health history on both the PDHA and PDHRA.

**Table 5. 3. Percentage of SMs endorsing each problem area on the PDHRA when they also endorsed it on the PDHA**

	All SMs N=67,541		Active Only N=54,062	
	N	Percent Endorsing	N	Percent Endorsing
General health history	19,848	77%	15,462	76%
Physical health concerns	10,583	46%	7,530	42%
Exposure concerns	11,702	33%	7,982	29%
TBI symptoms	2,288	37%	1,928	38%
PTSD symptoms	3,478	58%	2,753	55%
Depressive symptoms	1,837	32%	1,485	31%
Potential alcohol problems	12,875	63%	10,361	63%
Requests for support	4,890	35%	3,406	32%
Overall PDHRA	41,880	80%	32,635	79%

Table 5.4 below shows correlations between the number of symptoms reported for each problem area on the PDHA and PDHRA. These correlations tell how similar the number of items endorsed in each problem area is between the PDHA and PDHRA. All correlations ranged from 0.31 to 0.55, which are medium to large correlations. The strongest relationship was for TBI symptoms, with a correlation of 0.54 for all SMs, indicating that the number of TBI symptoms endorsed at the time of the PDHA is strongly related to the number of symptoms endorsed at the

time of the PDHRA. In other words, SMs reporting many TBI symptoms at the PDHA continued to report many symptoms at the PDHRA, while those reporting few symptoms at the PDHA also reported few symptoms at the PDHRA. This suggests that TBI symptoms are relatively stable between administrations of the two forms.

**Table 5. 4. Correlations between the number of items endorsed in each problem area on the PDHA and PDHRA**

	All SMs N=67,541	Actives Only N=54,062
	<i>r</i> =	<i>r</i> =
General health history	0.53	0.53
Physical health concerns	0.42	0.40
Exposure concerns	0.37	0.35
TBI symptoms	0.54	0.55
PTSD symptoms	0.39	0.39
Depressive symptoms	0.31	0.31
Potential alcohol problems	0.34	0.32
Requests for support	0.33	0.32
Overall PDHRA	0.52	0.51

*Note: All correlations were statistically significant,  $p < .0001$*

Since simple correlations might capitalize on relationships due to chance (correlations are unaffected by the presence of systematic bias), more sophisticated logistic regression analyses were conducted to examine how problems reported on the PDHA predict the problems reported on the PDHRA.

The first model estimates the likelihood of reporting a problem (e.g., depressive symptoms) in the PDHRA when the problem was reported in the PDHA. This model was estimated for all SMs (N=67,541 SMs) and for active duty SMs only (N=54,062 SMs). Problem endorsement on the PDHRA was predicted by the same problem endorsement on the PDHA, endorsement of any *other* problem on the PDHA, time between the PDHA and PDHRA, and the SM characteristics (see Analyses section, above). The second model builds on the first model by adding the total number of health care encounters between the PDHA and PDHRA to the list of predictors. Since health care data were only available for Active Duty SMs, the second model is estimated for this subsample. On average, Active Duty SMs had 3.2 health encounters after the PDHA (mean=3.24, SD=4.77, range 0-156). Table 5.5 shows the odds ratio of the two models.

**Table 5. 5. Odds of endorsing a problem area on the PDHRA when the same problem or any other problem was endorsed on the PDHA**

Type of Problem Reported in PDHRA	Active & Reserve N=67,541		Active Only N=54,062				
	Model 1		Model 1		Model 2		
	Same Problem in PDHA	Any Other Problem in PDHA	Same Problem in PDHA	Any Other Problem in PDHA	Same Problem in PDHA	Any Other Problem in PDHA	HCE Between Forms
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
General health history	5.38	2.02	5.28	2.00	3.33	1.93	1.18
Physical health concerns	3.48	2.27	3.77	2.33	3.19	2.25	1.05
Exposure concerns	4.89	1.43	4.74	1.36	4.35	1.32	1.02
TBI symptoms	25.70	2.53	27.54	2.47	21.60	2.30	1.06
PTSD symptoms	8.67	2.57	8.68	2.57	7.70	2.42	1.05
Depressive symptoms	9.87	2.18	10.40	2.07	8.04	1.90	1.06
Potential alcohol problems	5.25	1.12	5.17	1.14	5.45	1.16	0.99
Requests for support	4.44	2.25	4.73	2.37	4.66	2.33	1.02
Overall PDHRA	4.65		4.52		3.35		1.12

Note: All odds ratio were statistically significant  $p < .0001$

The results of the first model shown in Table 5.5 suggest that the PDHA strongly predicts responses on the PDHRA. SMs reporting a specific problem on the PDHA are very likely to report the same problem on the PDHRA. The predictability is strongest for TBI, PTSD and depressive symptoms. For example, SMs reporting any TBI symptoms in the PDHA were 26 times more likely to report TBI symptoms on the PDHRA than those who had not reported the TBI symptoms on the PDHA. SMs reporting depressive symptoms on the PDHA were almost 10 times more likely to report depressive symptoms on the PDHRA than SMs not reporting depressive symptoms on the PDHA. Reporting any *other* problem on the PDHA (besides the one of interest on the PDHRA) also significantly predicted the problem on the PDHRA, but to a much lesser degree (odds ratio ranged between 1 and 2.57). For example, SMs reporting a problem other than TBI symptoms on the PDHA were almost three times more likely to report TBI symptoms on the PDHRA than SMs reporting no other problems. In general, the specific problem area (e.g., TBI) was a better predictor of having symptoms of the same problem (TBI) in the future than other problem areas.

The results of model two, which added health care between the PDHA and PDHRA as a predictor, indicate that the amount of health care between both forms did **not** have a meaningful effect on predicting PDHRA problems (all odds ratios were close to 1) after accounting for types of problems reported on the PDHA. To further explore these results, a mediation model was estimated to determine if health care encounters between the PDHA and the PDHRA mediate the PDHA-PDHRA relationship. Results showed that problems reported on the PDHA had a direct effect of 0.24 ( $p < .0001$ ) on problems reported on the PDHRA. The mediation effect of health

care encounters between the two forms was only 0.002 ( $p=0.04$ ), confirming that problems reported on the PDHA are more predictive of problems reported on the PDHRA than health care encounters and that the intervening health care encounters had little effect on that relationship.

### **Receiving a Medical Referral on the PDHA Does Not Predict Declination of Referrals on the PDHRA**

The sample for this section consisted of active duty SMs only ( $N=54,062$ ). This section explores whether declination of referral on the PDHRA (4% of SMs) is predicted by receiving a medical referral on the PDHA or by health care encounters before the PDHRA.

First, a logistic regression was estimated to determine whether receiving a medical referral during the PDHA process would predict the declination of a referral during the PDHRA. The model controlled for SM comorbidity of problem types on the PDHRA, clinician risk questions and assessment, clinician total major concerns, and SM characteristics. Results suggest that receiving a medical referral during the PDHA did not have any predictive relationship to whether the SM would decline the PDHRA referral (odds ratio=1.03,  $p=0.67$ ).

A second logistic regression model was estimated which included number of health care encounters between the PDHA and the PDHRA in addition to the predictors from the first model. This model included active duty SMs only. Results showed that the number of health care encounters between the PDHA and PDHRA also did not predict whether the SM declined a medical referral during the PDHRA (odds ratio=0.99,  $p=0.06$ ).

### **Combat Exposure Increases SMs Self-reporting of Problems on PDHA and PDHRA**

The purpose of this section is to explore the relationship between reported combat exposure and SM reported problems on the PDHA and PDHRA. SMs were asked three questions on the PDHA to assess how they perceived their exposure to combat (see Appendix I for a complete description of the creation of the combat exposure variable). Forty-one percent of SMs endorsed at least one of the three combat exposure questions on the PDHA. The correlation between combat exposure and endorsing any self-reported problem area on the PDHRA was 0.15 ( $p<.0001$ ), which is considered to be a weak relationship. The correlation between combat exposure and the number of SM self-reported problem areas endorsed on the PDHRA was 0.23 ( $p<.0001$ ), which is also small. The relationship between combat exposure and number of problem areas endorsed on the PDHA was stronger, but still only moderate ( $\phi=0.32$ ,  $p<.0001$ ).

To further explore these results, a logistic regression model was estimated. When controlling for the SM characteristics (as described in Chapter 3), SMs who reported combat exposure were twice (odds ratio=1.96,  $p<.0001$ ) as likely to endorse any problem area on the PDHRA compared to SMs who did not report combat exposure. The odds ratio was higher for the PDHA. When controlling for the SM characteristics (except for time between departure and administration of the PDHRA, as it does not apply), SMs who reported combat exposure were almost three times (odds ratio=2.86,  $p<.001$ ) more likely to report any problem on the PDHA.

Another regression model was estimated predicting the number of SM self-reported problem areas endorsed on the PDHRA from combat exposure on the PDHA (while controlling for the other SM characteristics). Combat exposure was found to explain 10% ( $R\text{-square}=0.10$ ,  $p<.0001$ )

of the variance in number of problems endorsed, but the size of the effect was small ( $ES=0.05$ ). For the PDHA, combat exposure was found to explain 12% ( $R\text{-square}=0.12$ ,  $p<.0001$ ) of the variance in the number of problems endorsed on the PDHA, but again the effect size was small ( $ES=0.06$ ).

### ***Conclusions***

The relationship between the PDHA and the PDHRA was very strong, with SMs who reported a problem immediately after post-deployment much more likely to report the same problem at the re-assessment. Given that the relationship was much lower between any other problem at the PDHA and specific types of problems at the PDHRA lends support for the usefulness of these health risk appraisal tools as indicators of specific problems rather than a global indicator of health distress. Of note, the predictive relationship between the PDHA and the PDHRA for TBI, PTSD, and depressive symptoms was particularly strong. These strong relationships speak to the PDHA's reliability and its importance in terms of timeliness for identifying problems and receiving appropriate treatment.

Interestingly, the amount of health care that occurred between the PDHA and PDHRA did not predict SM reported problems on the PDHRA after adjusting for problems on the PDHA. This means that regardless of whether or not they received care or the amount of that care in the intervening period, SMs reported similar problems at each time point. This result was contrary to expectations, but cannot be explored further without a better understanding of the health care encounters. This report does not examine the type of health care SMs received, so there is potentially extraneous data confounding the results (e.g., SMs receiving dental care completely unrelated to the problems they reported on the PDHA). In addition, the quality and effectiveness of the health care SMs receive is unknown and beyond the scope of this evaluation. Further examination of the health care SMs receive is needed before the impact of health care can truly be determined. Furthermore, while understanding health care will be beneficial, it is also important to remember that the purpose of the post-deployment process is not only to identify and address problems, but also to document them. If SMs see the PDHA and PDHRA as opportunities to document their concerns for future purposes, it is not surprising that they would document the same types of problems on both forms when the problem continued to exist despite the potential for treatment to have ameliorated the problem.

Further, declining a referral on the PDHRA was thought to possibly be predicted by the issuance of a medical referral on the PDHA or health care encounters between the PDHA and the PDHRA, but results showed no support of this hypothesis.

Finally, it was found that SMs who reported combat exposure, as measured in the PDHA, were twice as likely to endorse any problem area on the PDHRA and three times as likely to endorse a problem area on the PDHA. In addition, combat exposure explained 10% and 12% of the variance in the number of problem areas endorsed on the PDHRA and PDHA, respectively. The weak relationship between combat exposure and problems reported immediately and several months after post-deployment on the PDHRA is not consistent with the literature that shows that combat exposure is a risk factor for later health and mental health problems (Hoge, et al., 2006; 2004). This study was limited by defining combat exposure only by the three questions on the PDHA and thus may not be adequately capturing combat exposure as a risk factor. Future studies

of the PDHA and PDHRA as health risk appraisal tools would benefit from the inclusion of expanded measures of combat exposure. Further, future analyses of the existing dataset could compare the strength of the relationship between the PDHA-assessed combat exposure and specific problems reported on the PDHA and PDHRA.

### **Relationship to Other Evaluation Findings**

This chapter was unique in that it focused specifically on the relationship between the PDHA and the PDHRA. It was found that SM self-reported problems were highly correlated between screenings, indicating that SMs tended to report the same symptoms on both forms. Because the PDHA and PDHRA are likely administered at different locations (PDHA generally in theater versus PDHRA at home base), the correlation between forms suggests that the SM is the determining factor for self-reported symptoms and that location level factors, such as differences among PDHRA locations reported in chapter 10, play a minimal role. This is supported by the finding in chapter 6 that SMs' responses on VU's SM survey were statistically significantly different by location, but the differences were very small. This suggests that the variance in referrals unaccounted for in chapter 4 is not adequately explained by location-level factors.

It was also reported in this chapter that receiving a medical referral during the PDHA and/or having health care between the PDHA and the PDHRA did not predict declining a referral on the PDHRA. This seems to indicate that declination of referral is not related to past health care encounters; this could be due to a number of reasons, among them either the HCE being successful and the SM no longer needing additional care, the SM not accepting the PDHA referral, the SM's reluctance to accept a referral, or the SMs' frustration with poor care. Findings in chapter 6 show factors that may play a role. Among SMs with problems as reported on VU's SM survey, the majority seek help from family or friends rather than seeking professional help. It is possible that this mode of help-seeking resolves less severe problems. However, those who reported having an emotional, stress, family or alcohol problem on the SM survey also indicated less willingness to disclose on the PDHRA and had more negative attitudes about help seeking and accepting help. Chapter 4 showed that a substantial number of SMs had an increase in health care encounters after the PDHRA occurred, most significantly for those who received medical referrals. These results may indicate that the possible education and suggestion of going to seek help may be enough to prompt SMs into treatment. If that were true, SMs who perceive stigma about receiving help may be declining referrals during the PDHRA, but actually going to care after the PDHRA process.

### **Limitations and Directions for Future Research**

These analyses focused on the endorsement of any problems on the PDHRA, but it would be beneficial in the future to explore which types of problems are more affected by experiencing combat during deployment. Also, understanding how combat exposure affects problems endorsed on the PDHA compared to the PDHRA is also important, and should be studied in the future.

## **Chapter 6: Service Member Characteristics and Exposure to Battlemind II Influence Attitudes Towards the PDHRA Process**

### ***Introduction***

#### **Background and Significance**

As discussed in the literature review (see Chapter 2), there are several factors that may influence the PDHRA process from the Service member's (SM's) perspective. These factors include aspects of the military work environment, post-deployment social support, unit leadership support, unit cohesion, stigma toward mental health problems, SM's awareness of problems, and individual attitudes toward help-seeking and self-disclosure.

#### **Objective**

In this chapter, we specifically explore factors related to the SM that may influence outcomes of the PDHRA process. Most of these factors are derived from the SM survey (see Appendix Q), which was created by Vanderbilt (VU) for this evaluation. The survey assessed those factors identified in the research literature previously summarized in Chapter 2, and also included specific attitudes toward the PDHRA process. An additional SM-related measure is exposure to deployment-related education, specifically the Army's Battlemind II program. Through a quasi-experiment, SMs were grouped into two conditions: exposure as a group to Battlemind II prior to completion of the PDHRA self-report and clinical interview versus no such exposure.

The original intended purpose of this chapter was to not only describe SM attitudes and self-reported characteristics relevant to the PDHRA process, but also to explore how these factors predicted actual behavior as evidenced by SM self-report of problems and clinician documentation of concerns and referrals on the DD Form 2900. Preliminary data analyses uncovered complex inter-relationships among and between variables from the SM survey and the PDHRA suggesting potential two- and even three-way interactions. Unfortunately, there was insufficient time to fully explore these complex data due to government delays in providing the necessary data (see Appendix B). Specifically, VU documented final receipt of the de-identified linking file allowing us to match SM surveys to DD Form 2900s on August 10, 2009. As stated in our contract modification dated June 26, 2009, which extended VU's period of performance through November 30, 2009, completion of the approved Scope of Work depended on receiving all data from DoD by July 1, 2009. Therefore, the purpose of this chapter was modified to be as follows.

First, SM attitudes and characteristics relevant to the PDHRA process are described including relationships between these factors assessed on the SM survey. Second, SM report of problems on the survey (which was anonymous) was compared to SM self-report of similar problems and clinician documentation of concerns and referrals on the DD Form 2900. Third, SM attitudes and characteristics relevant to the PDHRA process were compared between SMs exposed to Battlemind II prior to PDHRA completion and those who were not exposed.

## **Study Design and Aims**

First, this chapter examines the relationships between SM attitudes relevant to the PDHRA process and other self-reported SM characteristics. The SM survey was designed to measure the following attitudes (see Appendix R for the list of SM survey questions pertaining to each topic area):

- Post-deployment support and help seeking
- Unit cohesion for personal problems
- PDHRA leadership support
- PDHRA self-disclosure
- Satisfaction with the PDHRA clinician
- Awareness of others' problems
- General willingness to self-disclose
- Perceived stigma related to disclosure
- Barriers to accepting mental health referrals

In addition, there were several self-reported characteristics that may be relevant to SM attitudes toward the PDHRA process. These included:

- Unit leadership issues (NCO or Officer in theater, briefed SMs on PDHRA)
- Anonymous report of problems (SM experienced an emotional, alcohol, stress, or family problem since deployment, had family or friends suggest they seek help for such a problem)
- Help-seeking among SMs who reported such a problem (formal supports included medical and mental health professionals, informal supports included religious/spiritual leaders and family/friends)
- SM planned to seek promotion in the next six months or knew the DoD disclosure policy relevant to security clearance
- PDHRA clinician issues (SM knew the clinician before the PDHRA interview, was in theater with the clinician)
- PDHRA education (read written materials, viewed websites, or saw a film/video related to reintegration)

SMs with completed surveys were linked to individual PDHRAs to examine how factors measured on the survey correlated with SM-reported problems on the PDHRA, clinician referrals and declination of referrals. For a subset of SMs who completed the VU-administered survey, a quasi-experiment was conducted to examine the influence of viewing *Battlemind II* on SMs' attitudes and characteristics relevant to the PDHRA process as assessed on the survey.

## ***Methods***

### **Procedure**

SMs from each of the four military branches – Army, Navy, Marines, and Air Force – were eligible to participate in the survey. However, survey participants were recruited in different ways and at different times. Service members from the Army, Navy, and Marines were recruited during Vanderbilt University (VU) site visits to ten PDHRA events from January 2009 through April 2009. All SMs who completed the PDHRA during the site visit were eligible to participate

in the survey (see Appendix B for more details on site visits). Participants from the Air Force were recruited online with the assistance of the Air Force Medical Operations Agency within four weeks of completing the PDHRA process. All Air Force participants completed the PDHRA between March 15, 2009 and May 15, 2009. Other SMs completed the survey in conjunction with a PDHRA event at one of 34 traveling team events held by a contracted agency who conducts PDHRA screenings for DoD; these screenings took place between March 6, 2009 and April 5, 2009. For a complete list of participants by PDHRA event location, see Table 6.1.

VU researchers visited ten locations to recruit SMs for surveys after they completed the PDHRA process. In order to link the survey information to the corresponding PDHRA forms, SMs were asked to provide their birth date, initials, branch of service, and pay grade on blue cards. Each card was printed with a unique serial number, which was also printed on the survey. The cards were separated from the survey and sent to Force Health Protection and Readiness (FHP&R) where the information was placed in a spreadsheet which was then sent to an epidemiologist at the Armed Forces Health Surveillance Center (AFHSC) who had access to PDHRA files. Each record (i.e., SM) in the data set was assigned a unique ID number. The number was used to link the SM survey data and the PDHRA data. After all identifying information was removed from the PDHRA files, they were sent to Vanderbilt along with the unique ID number. Vanderbilt maintained the hard copy surveys from site visits, which contained no identifying information, when the visit was finished.

The procedure described above relates to Army, Navy, and Marine site visits. The linking procedure for Air Force participants was slightly different because no Air Force site visits were conducted; data were obtained with cooperation from the Air Force Medical Operations Agency (AFMOA). For the Air Force, individuals who had completed the PDHRA recently (March 15 through May 15, 2009) were recruited to complete the SM survey via an online survey. AFMOA provided FHP&R with the same information on the site visit cards for everyone recruited to participate, along with a unique ID number assigned to each SM. FHP&R and AFHSC used this information to match completed surveys to the corresponding PDHRAs, with the resulting de-identified linking file sent to Vanderbilt.

SMs recruited during traveling team events conducted by the contracted agency's travelling team did not use the above linking process and thus were not able to be linked to a PDHRA. The contracted agency's staff distributed and collected the surveys, and sent them to VU at the end of each event.

Note that 198 SMs who had been deployed to Kosovo and were surveyed in Johnston, IA completed the SM survey. These SMs were excluded from this analysis to maintain consistency in deployment locations (i.e., all other participants were deployed for OIF or OEF). Thus, the final dataset included a total of 44 settings (i.e., locations) based on the location of the PDHRA event and the group responsible for collecting the data: 34 traveling team events (TT) conducted by the contracted agency, 9 VU site visits, and online AF participation. Table 6.1 shows the number and percentage of participants associated with each setting.

**Table 6. 1. Total participants completing SM surveys by PDHRA setting (N=6,714)**

Setting	N	%
<b>Traveling team collection</b>		
Ft. Gordon, GA	8	0.1
Ft. Belvoir, VA	16	0.2
Jacksonville, FL	21	0.3
Sacramento, CA	24	0.4
Cortland Manor, NY	26	0.4
Camp Pendleton, CA1	27	0.4
Schaumburg, IL	29	0.4
Little Rock, AR	35	0.5
Lexington, KY	39	0.6
Alameda, CA	39	0.6
San Diego, CA	40	0.6
Manistee, MI	41	0.6
North Little Rock, AR2	43	0.6
Geneseo, NY	44	0.7
Wyoming, MI	47	0.7
Cadillac, MI	49	0.7
Bossier City, LA	50	0.7
Lima, OH	53	0.8
Dowagiac, MI	57	0.8
Camp Pendleton, CA2	64	1.0
Annville, PA	66	1.0
Tucson, AZ	67	1.0
North Little Rock, AR	68	1.0
Sandusky, OH	78	1.2
Camp Roberts, CA	87	1.3
Tiffin, OH	90	1.3
Murray, KY	91	1.4
North Little Rock, AR	93	1.4
Cleveland, OH	130	1.9
Barrigada, GU	150	2.2
Arkadelphia, AR	190	2.8
Walbridge, OH	204	3.0
Evansville, IN	529	7.9
Indianapolis, IN	1173	17.5
<b>Vanderbilt University site visit collection</b>		
Milwaukee, WI	64	1.0
Quantico, VA	68	1.0
Camp Pendleton, CA	102	1.5
Port Hueneme, CA	136	2.0
Ft. Drum, NY	140	2.1
San Diego, CA	312	4.6
Ft. Riley, KS	489	7.3

Setting	N	%
Ft. Wayne, IN	501	7.5
Ft. Campbell, KY	878	13.1
<b>Online collection</b>		
Air Force	256	3.8
<b>Total</b>	<b>6714</b>	<b>100.0</b>

## Data Sources

There are two sources of data for this analysis – the SM survey and the PDHRA (additional PDHRAs were obtained for dates until June 1, 2009) (see Appendix I for more detail on data sources). Surveys were collected from 6,714 SMs from 44 PDHRA events (see Table 6.1). A total of 2,217 SMs were matched to PDHRA data.

### *Matching procedures*

From the VU researchers' site visits, 2,973 SM surveys were collected. The number of cards containing the requested SM information was 2,954. SM surveys were matched to SMs using the information provided on each SM's card, as described above. Of the 2,954 cards, there were 2,297 possible linkages to a SM. Once the linkage was completed, the data were checked and processed to correct for errors. Seven SMs had multiple PDHRA records between January 1, 2009 and May 31, 2009, so the PDHRA that corresponded more closely with the date of the SM survey was kept for analysis. Records were deleted for several reasons. If the date of the SM survey was before the date the PDHRA was completed, then the record was deleted. Also, if information was inconsistent between the PDHRA and the SM survey (e.g., different sex, age, or rank), then this was considered to be an incorrect match and the record was deleted. After processing, 2,217 SM surveys were correctly linked to PDHRAs. See Table 6.2 below for a breakdown of the data cleaning process.

**Table 6. 2. Number of records removed and reasons**

	Number of Records
Number of surveys collected	2,973
Number of blue cards sent to FHP&R for linking	2,954
Number of surveys matched to a SM	2,297
Number of matches after removing matches where survey was completed before the PDHRA	2,254
Number of matches after removing multiple PDHRAs	2,245
Number after removing incorrect matches	2,239
Number after removing matches where no PDHRA was found	2,217
<b>Final number of records</b>	<b>2,217</b>

In addition to the data collected during site visits and from the Air Force online, the contracted agency collected 3,817 anonymous SM surveys during 34 PDHRA events. Because these participants did not complete cards with the limited demographic information, these surveys could not be linked to PDHRAs. These data were only used in analyses that did not use data from the PDHRA.

## Measures

The SM survey included 82 items on factors that may influence the PDHRA process (see Appendix Q for the survey and Appendix S for descriptive statistics of all items). Items were either created by VU or selected from the literature. Items pertaining to post-deployment social support were taken from the Deployment Risk and Resilience Inventory (King, King, Vogt, Knight, & Samper, 2006) and the Unit Behavioral Health Needs Assessment Survey (UBHNAS) (WRAIR, 2006, April). Items from the UBHNAS also measured barriers to care and stigma, in addition to items created by Hoge and colleagues (Hoge, et al., 2004). Items from the Self Awareness Assessment were used to measure self awareness (<http://www.myskillsprofile.com/questionnaire.php>). Attitudes toward help seeking were measured using items from the following measures: the UBHNAS, the Attitudes Toward Seeking Professional Psychological Help (Fischer & Turner, 1970), and questions developed by Vogel and colleagues (Vogel, Wade, Wester, Larson, & Hackler, 2007b). Items measuring self disclosure were obtained from the Distress Disclosure Index (Kahn & Hessling, 2001).

Questions were also asked about the PDHRA process, such as if the SM knew the PDHRA clinician prior to the interview. Some of these items were derived from a satisfaction survey created by a contractor to the Army, Booz Allen Hamilton. Other individual items included questions about the SMs plans for retirement or seeking promotion and whether they knew the DoD policy on health disclosure. Lastly, the SM survey included questions about demographic background, including, age, gender, and rank.

## Study Population

See Appendix T for a description of the study population.

## Analyses

### *SM Survey Description*

Prior to conducting analyses, the items pertaining to specific SM attitudes relevant to the PDHRA process as described previously were evaluated using the Cronbach's coefficient alpha to assess internal consistency and reliability. Cronbach's (1988) alpha was calculated for each set of items, interpreting  $\alpha \geq 0.80$  as satisfactory, indicating that a scale was of sufficient length and that the items appeared to be measuring similar content (Nunnally & Bernstein, 1994). In addition, the corrected item-total correlation was reviewed, using a criterion of  $r < 0.30$  for removal of items that failed to contribute to reliability (Lord & Novick, 1968).

Recall that the intent of this chapter is not to generalize information to any particular population, which would be inappropriate given the convenience sampling strategy, but rather to explore how SM characteristics are related to each other and to the PDHRA process. Therefore, as with the description of the study population, descriptive statistics are presented for SM scales and individual items for informational purposes prior to the focus on the primary study analyses. For analyses that explored relationships among scales and items within the SM survey, correlations and means testing were used.

Correlations (Pearson's  $r$ ) were computed to determine the relationship between scales. Effect sizes are better indicators of whether differences are meaningful by measuring the strength of the relationship between two variables. Effect sizes (ES) for correlations vary between -1 and +1.

According to Cohen (1988, 1992), correlations of about 0.1 correspond to a small ES; 0.3 to a medium ES; and 0.5 to a large ES. T-tests were computed to explore the relationships between individual items on the survey and scales. Because we were conducting multiple tests at the mean, the likelihood of finding differences merely by chance increases. To control for the number of tests we conducted bootstrapped t-tests. According to Cohen (1988, 1992), t-test effect sizes of about 0.2 are considered small; 0.5 are considered moderate; and 0.8 are considered large.

SM surveys were administered in 44 distinct sites or locations and therefore the analysis should not ignore the fact that SMs were nested within locations. Instead of using classical statistics, which ignores the nested or interdependency of subjects within clusters, this section uses Hierarchical Linear Models (HLM). HLM allows for increased accuracy and flexibility when analyzing multilevel data (Plewis, 1997; S. W. Raudenbush, 1993). One of the main advantages of fitting multilevel linear models to hierarchical structured data is that it allows us to determine how much of the outcome or scale variability is due to the SM level or to the site level (Singer & Willett, 2003). Another advantage of these models is their ability to deal with unbalanced data; the number of surveys greatly differed among sites (i.e., one site has 8 surveys while another has 1,173 surveys). Therefore, HLM models were estimated to determine how much variability was due to setting of the PDHRA and how much was due to SM differences.

Next, when relating items from the SM survey to PDHRA self-reported problems, chi-squares were computed to determine if SMs reported alcohol, emotional, stress, or family problems differently on the SM survey and the PDHRA. Further means testing explored how reporting of such problems on the SM survey and the PDHRA were related to clinician concerns and referrals as documented on the PDHRA.

Finally, to determine the influence of Battlemind II on the PDHRA process, mean tests were used to explore how SMs' perceptions and willingness to disclose differed by whether they were exposed to Battlemind II as a group prior to completing the DD Form 2900 and the accompanying clinical interview. Further description of this quasi-experiment is provided later in this chapter where the relevant results are presented.

## ***Results – Section 1: Descriptive Statistics and Relationships Between Factors Assessed on the SM Survey***

### **SM Survey Scales Were Reliable**

Recall that the SM survey was administered to SMs after they had completed the PDHRA process. The nine sets of questions (i.e., the nine scales) showed reasonable internal reliability within each scale (see Table 6.3) and divergent validity (that the scales measured different constructs) across scales (as shown by the lack of correlations above 0.80 in Table 6.5).

The scales are briefly described below. For a complete list of questions included in each scale see Appendix R.

- **Scale 1: Post-deployment Support and Help Seeking** (10 items). This scale measures the level of support participants have from family and friends, and their attitudes toward and willingness to seek help, specifically for psychological problems. A higher score on

this scale means that SMs had more post-deployment support and were more willing to seek help.

- **Scale 2: Unit Cohesion for Personal Problems** (3 items). This scale measures the level of support participants feel within their unit for their personal problems. A higher score on this scale means that SMs perceived more unit cohesion.
- **Scale 3: PDHRA Leadership Support** (5 items). This scale measures participants' perceptions of NCO support for taking care of health problems and encouraging openness and embracing the PDHRA process. It also assesses how open the NCO has been about his/her own problems or willingness to support unit members' problems. A higher score on this scale means that SMs perceived stronger leadership support.
- **Scale 4: PDHRA Self Disclosure** (3 items). This scale indicates participants' willingness to fully disclose physical, emotional, and alcohol problems on the DD Form 2900. A higher score on this scale means that SMs were more willing to disclose on the PDHRA.
- **Scale 5: Satisfaction with the PDHRA Clinician** (7 items). This scale measures participants' satisfaction with the PDHRA clinician, including issues of attention, time, and trust. A higher score on this scale means that SMs were more satisfied with the PDHRA clinician.
- **Scale 6: Awareness of Others' Problems** (4 items). This scale measures how aware participants are of others' problems specific to common post-deployment symptoms (e.g., PTSD depression, conclusion, alcohol abuse). A higher score on this scale means that SMs believe they were more aware of others' problems.
- **Scale 7: General Willingness to Self-Disclose** (4 items). This scale measures how willing someone is to disclose problems to others rather than keeping them to oneself. A higher score on this scale means that SMs were more willing to self-disclose.
- **Scale 8: Perceived Stigma Related to Disclosure** (4 items). This scale assesses perceptions of negative consequences that can be associated with disclosing emotional or mental health problems on the PDHRA. A higher score on this scale means that SMs perceived more stigma related to disclosure.
- **Scale 9: Barriers to Accepting Mental Health Referral** (7 items). This scale measures the barriers to seeking mental health treatment through the PDHRA. High perceived levels of barriers may lead to lower disclosure due to lack of trust in receiving treatment. A higher score on this scale means that SMs perceived more barriers to seeking mental health treatment.

Most items were scored on a scale of one (strongly disagree) to five (strongly agree), but some were yes/no (see Appendix Q for survey) or had other response categories. Note that some scales included items that were worded positively in the survey (i.e., a higher score is "better") and other items were worded negatively. Items within the same scale were coded in the same direction before creating the summary scale score. All scales and responses to the individual items within each scale could range from one to five. For all but two scales (8 and 9), a higher score denotes a more positive (better) response; however, for the stigma (Scale 8) and barriers (Scale 9) scales, a higher score denotes a more negative response (e.g., more stigma). Table 6.3 presents descriptive statistics and the estimate of reliability for each of the nine scales. Note that higher scores indicate more agreement that the scale topic is present, e.g., more unit cohesion for personal problems, more PDHRA leadership support, more barriers to accepting mental health referrals.

**Table 6. 3. SM survey scale scores and standardized Cronbach's alphas**

	Mean	Min, Max	SD	Alpha (Std.)
Scale 1. Post-deployment support and help seeking	3.54	1.1, 5	.51	.77
Scale 2. Unit cohesion for personal problems	3.70	1, 5	.84	.88
Scale 3. PDHRA leadership support	3.54	1, 5	.63	.77
Scale 4. PDHRA self disclosure	3.64	1, 5	.89	.90
Scale 5. Satisfaction with the PDHRA clinician	3.58	1, 5	.64	.87
Scale 6. Awareness of others' problems	3.58	1, 5	.65	.77
Scale 7. General willingness to self-disclose	3.18	1, 5	.77	.75
Scale 8. Perceived stigma related to disclosure	2.70	1, 5	.88	.88
Scale 9. Barriers to accepting mental health referral	2.69	1, 5	.64	.80

Across all scales, SMs were generally neutral or slightly positive, with means above the midpoint (3.0) for scales 1-7 and below the midpoint for scales 8 and 9. This suggests that survey participants, on average, had positive views of such factors as unit cohesion and leadership support; they also had fewer problems (thus, more positive ratings) related to stigma and barriers to care.

### **A Substantial Minority of SMs Admit to Not Fully Disclosing on PDHRA**

The three questions in our SM survey that measured PDHRA self disclosure asked SMs if they had *fully* disclosed problems or concerns related to physical health, emotional health, and alcohol use. Two-thirds of SMs agreed or strongly agreed that they fully disclosed their concerns in these three areas. However, disclosure on the PDHRA was problematic for many SMs. Over 600 (10.3%) SMs reported that they did not fully disclose physical problems, over 700 (12.6%) did not disclose emotional problems, and 800 (13.7%) did not disclose alcohol use problems. Moreover, about a quarter of SMs chose not to indicate the status of their disclosure (neither agree/disagree) on emotional problems and alcohol use problems, with slightly fewer (21.5%) on physical health problems. These findings suggest that while most SMs were open about important health concerns on the PDHRA, a substantial minority of SMs were not. It is also reasonable to believe that SMs did not fully disclose their true responses on these items thus making it likely that these numbers under-represent the percentage of SMs who did not fully disclose on the PDHRA. Recall that the SM survey was anonymous. SMs indicate a greater willingness to fully disclose on the PDHRA than in general.

### **SM Survey Scales Differ Very Little by Setting**

Using unconditional HLM mean models on the nine SM survey scales, we first examine how much of the scale variability is due to site level. Unconditional models do not control for any other factors, but they allow estimation of the site intra class correlation (ICC) per each one of the scales (shown in Table 6.4). Most of the site ICCs were statistically significant, ranging from 1.8 to 5.6%, which suggests that the scale averages differ significantly by site; but the portion of the total variance due to site differences is small (<6%). Raudenbush and Liu (2000) suggest rules of thumb similar to those proposed by Cohen (1988) for small, medium, and large ICCs, namely that small/medium/large ICCs are 5%/10%/15%. By this criterion, the between-site ICCs are generally small. Thus, the average scales vary even more among SMs within sites (all nine with site ICCs > 94%).

**Table 6. 4. Site intra class correlations**

Scales	Between Site ICC	Within Site ICC
Scale 1. Post-deployment support and help seeking	<b>2.8%</b>	<b>97.2%</b>
Scale 2. Unit cohesion for personal problems	<b>5.6%</b>	<b>94.4%</b>
Scale 3. PDHRA leadership support	<b>2.9%</b>	<b>97.1%</b>
Scale 4. PDHRA self disclosure	<b>1.2%</b>	<b>98.8%</b>
Scale 5. Satisfaction with the PDHRA clinician	<b>4.6%</b>	<b>95.4%</b>
Scale 6. Awareness of others' problems	0.5%	<b>99.5%</b>
Scale 7. General willingness to self-disclose	<b>1.9%</b>	<b>98.1%</b>
Scale 8. Perceived stigma related to disclosure	<b>1.8%</b>	<b>98.2%</b>
Scale 9. Barriers to accepting mental health referral	<b>2.5%</b>	<b>97.5%</b>

*Note: Bolded means statistically significant at 0.001*

### **Post-Deployment Support and Help Seeking Strongly Related to Other SM Scales**

Table 6.5 shows the correlations among the nine SM survey scales. Because site did not have a meaningful effect, it was not included in these analyses. Note that all correlations were statistically significant; more meaningful however, are those with moderate (0.30) to large (0.50) effect sizes. These are bolded in the table.

**Table 6. 5. Correlations among SM survey scales**

	1	2	3	4	5	6	7	8
1. Post-deployment support and help seeking	-							
2. Unit cohesion for personal problems	<b>.40</b>	-						
3. PDHRA leadership support	<b>.45</b>	<b>.60</b>	-					
4. PDHRA self disclosure	.28	.18	.23	-				
5. Satisfaction with the PDHRA clinician	<b>.41</b>	<b>.31</b>	<b>.40</b>	<b>.30</b>	-			
6. Awareness of others' problems	<b>.32</b>	.27	.27	.18	.19	-		
7. General willingness to self-disclose	<b>.64</b>	.27	<b>.31</b>	.16	<b>.30</b>	.17	-	
8. Perceived stigma related to disclosure	<b>-.36</b>	-.25	<b>-.32</b>	-.14	-.25	-.09	<b>-.34</b>	-
9. Barriers to accepting mental health referral	<b>-.40</b>	-.24	<b>-.34</b>	-.17	<b>-.30</b>	-.08	<b>-.36</b>	<b>.54</b>

*Note: All Pearson correlations significant at  $p < .001$  (2-tailed)*

Post-deployment support and help seeking (scale 1) had moderate to large positive correlations with unit cohesion (scale 2), leadership support (scale 3), satisfaction with PDHRA clinician (scale 5), awareness of other's problems (scale 6) and willingness to self-disclose (scale 7). The high and consistent correlation of post-deployment support and help seeking with other scales suggests that it is an important factor in attitudes that may influence the PDHRA process and SM attitudes in general. However, post-deployment support may not lead to corresponding changes in disclosure on the PDHRA (scale 4), as the low correlation suggests.

As may be expected, unit leadership support (scale 3) was highly correlated with unit cohesion for personal problems (scale 2). Both were also modestly related to scale 5, satisfaction with the clinician. The first relationship indicates that supportive leaders are associated with cohesive units. The latter finding is interesting, in that it may indicate that unit support of the PDHRA

process could potentially have positive implications for the interview portion of the process. Satisfaction with the PDHRA clinician was also moderately correlated with PDHRA self disclosure (scale 4) and willingness to self-disclose (scale 7), suggesting that SMs who are more likely to fully disclose on the PDHRA are also more satisfied with the PDHRA clinician. Since this is a correlational finding, we cannot conclude the direction of causality here.

However, as indicated by the low correlations, self disclosure on the PDHRA was not associated with a general willingness to self-disclose (scale 7), perceived stigma related to disclosure (scale 8), or barriers to accepting a mental health referral (scale 9). This suggests that self disclosure specific to the PDHRA is not related to a general style of disclosing problems, nor to typical barriers to care or stigma related to emotional or mental health problems. We explore this finding further in the next section that describes single items also included on the SM survey.

Perceived stigma related to general disclosure (scale 8) and barriers to accepting mental health referrals (scale 9) were positively correlated with each other, and negatively correlated with all other scales. This means that as stigma or barriers increase, the other constructs measured decreased. There were moderate negative correlations for each scale with post-deployment support and help-seeking, leadership support, and willingness to self-disclose. This suggests that participants who endorse more stigma and barriers experience less support and are less willing to self-disclose or seek help. Further, SMs who report more barriers to accepting a mental health referral are less satisfied with the PDHRA clinician.

### **Almost Two-Fifths of SMs Anonymously Report an Emotional, Alcohol, Stress, or Family Problem and/or Have Friends or Family Suggest They Seek Help**

In addition to the items that make up the scales described above, there were several single items of importance included in the SM survey that may have influenced how SMs approach the PDHRA process. This section presents descriptive statistics for those items and discusses the relationships of those items to each other and the SM survey scales. See Appendix S for descriptive statistics on all items in the SM survey.

Table 6.6 presents information on self-reported characteristics from the SM survey. All questions were binary (the SM indicated yes or no in response to each). The majority of SMs reported that at least one NCO from their current unit was in theater with them on their last deployment, and that at least one unit NCO or Officer had briefed the unit on the PDHRA. In the next six months, few SMs were planning to separate from the military, but about half were seeking promotion. Only about a quarter of SMs knew that current DoD policy no longer requires military personnel to disclose deployment-related mental health treatment when applying for security clearance.

SMs were asked several questions about health concerns related to an emotional, alcohol, stress, or family problem they may have. About a third of SMs reported that they had experienced such a problem since returning from deployment, and one-fifth of SMs reported that family or friends had suggested they seek help from a professional for such a problem. These two items were moderately correlated ( $\phi=0.52$ ,  $p<.001$ ), indicating that SMs who reported problems tended to also have family or friends suggesting they seek help. Taken together, 39% of SMs either reported a problem and/or had friends or family members suggest they seek help.

**Table 6. 6 Self-reported characteristics from SM survey**

	N	% Yes
<b><i>NCO support</i></b>		
At least one NCO or Officer from current unit in theater on last deployment	6626	82.7%
At least one unit NCO or Officer briefed unit on PDHRA	6628	86.5%
<b><i>Military issues</i></b>		
Planning to separate from military in next 6 months	6654	10.9%
Seeking promotion within military in next 6 months	6649	55.3%
Knew DOD policy on health disclosure	5872	25.2%
<b><i>Health concerns/Help-seeking for an emotional, alcohol, stress, or family problem</i></b>		
Friends or family suggested SM seek help from a professional	6120	22.2%
Since deployment experienced a problem	6518	33.8%
<b><i>If endorsed an emotional, alcohol, stress, or family problem, talked to:</i></b>		
Medical professional	2122	29.7%
Mental Health professional	2140	30.8%
Religious/Spiritual leader	2119	22.5%
Family or friends	2164	74.3%

### **Among SMs With Problems, the Majority Seek Help From Family or Friends**

Those SMs who reported an emotional, alcohol, stress, or family problem were asked if they had talked to various individuals about the problem. While the majority had spoken to family or friends, fewer had sought professional help from medical or mental health professionals, and even fewer had talked to religious or spiritual leaders. Correlations between these four sources of support are presented in Table 6.7 below. Note that all correlations were statistically significant; more meaningful however, are those with moderate (0.30) to large (0.50) effect sizes. These are bolded in the table. The results suggest that SMs who sought help from formal supports, such as medical or mental health professionals, were distinct from those who spoke to informal sources of support, such as religious/spiritual leaders or family and friends. Similarly, SMs appeared to seek informal support from either religious/spiritual leaders or family and friends, but few tended to seek help from both.

**Table 6. 7. Help-seeking for SMs who reported emotional, alcohol, stress, or family problems since deployment: Correlations among sources of support**

	Medical	Mental Health	Religious/Spiritual
Medical professional			
Mental Health (MH) professional	<b>.60</b>		
Religious/Spiritual leader	.21	.25	
Family or friends	.14	.14	.23

*Note: All correlations significant at  $p < .001$  (2-tailed). Correlations with medium to large effect sizes are bolded.*

### **SMs Were Generally Neutral to Positive That the PDHRA Process had Helped Them Identify Their Concerns**

SMs also responded to several questions about the PDHRA process they had undergone prior to completing the survey. Very few (8.2%) knew the clinician who conducted the PDHRA interview prior to that contact; among those who did, the majority (74.7%) reported that the clinician was associated with their unit. Regarding the length of the PDHRA interview, the majority were reported to be 10 minutes or less (26.9% less than 5 minutes, 46.5% 5-10 minutes), with about a fifth 11 minutes or more (16.9% 11-15 minutes, 6.3% 16-25 minutes, 3.4% 26 or more minutes). When asked the extent they agreed or disagreed that completing the self-report section of the PDHRA had helped them identify their concerns, SMs were generally positive with the mean of 3.3 above the midpoint (3.0) of the scale ( $SD=0.85$ ), although the modal response (46.2%) was neither agree nor disagree. A minority of SMs (13.7%,  $N=787$ ) disagreed or strongly disagreed with this statement.

### **SMs who Used Deployment Cycle Education Materials Found Them to be Helpful**

Various educational opportunities are provided to SMs to help them reintegrate post-deployment. As presented in Table 6.8, survey results show that about half the SMs had read written materials. Fewer had seen a film or video (not on the internet) and had viewed web sites about the kinds of problems SMs can face upon reintegration. When reintegration resources were used, the vast majority found them to be helpful, regardless of the source of material.

**Table 6. 8. Use of and satisfaction with deployment cycle educational materials**

	SM Used This Resource		If Used, Helpful	
	N	% Yes	N	% Yes
Read written materials	6623	57.2	3577	88.1
Film or video (not on the web)	6464	35.5	2184	85.9
Viewed web sites	6614	56.0	3480	80.2

### **SMs who Received a Unit Leader PDHRA Briefing and PDHRA Education Report That They More Fully Disclosed on PDHRA**

Within the SM survey, three items (56-58; see Appendix Q) were related to whether or not SMs reported that they fully disclosed their physical, emotional, and alcohol problems on the

PDHRA<sup>2</sup>. Because we were conducting multiple tests at the mean, the likelihood of finding differences merely by chance increases. To control for this, bootstrapped t-tests were conducted. Bootstrapped t-tests were computed to determine mean differences in physical, emotional, and alcohol disclosure for SMs who: 1) had a least one unit NCO or Officer in theater with them, 2) were briefed on the PDHRA by a unit NCO or Officer, 3) said they had an emotional, alcohol, stress, or family problem since deployment, 4) had family or friends suggest they seek help, 5) planned to separate from the military in the next six months, 6) planned to seek promotion in the next six months, 7) knew the DoD disclosure policy, 8) knew the clinician before the PDHRA interview, 9) was in theater with their clinician, 10) read written materials related to reintegration, 11) viewed websites related to reintegration, or 12) saw a film or video related to reintegration.

Only significant results are presented in this section. For complete results, see Appendix U. Several factors positively influenced SM attitudes toward disclosure on the PDHRA for all three types of problems (i.e., they were more likely to agree that they had fully disclosed), although all effect sizes were small. These factors included being briefed on the PDHRA from a unit leader (ES=0.11-0.14) and receiving the following types of education related to reintegration: written materials (ES=0.12-0.18), film or video (ES=0.13-0.17), and websites (ES=0.12-0.13; not significant for disclosure on alcohol use).

### **SMs who are Seeking Promotion, Have a Problem, or Knew the PDHRA Clinician Report Being Less Likely to Fully Disclose Specific Types of Problems on PDHRA**

Notably, several factors negatively influenced SM attitudes towards disclosure on the PDHRA for specific types of problems (again, all effects sizes were small). SMs who reported they were planning to seek promotion in the next six months were significantly less likely to agree that they had fully disclosed problems or concerns about their emotional health. (ES=0.05). SMs who anonymously reported an emotional, alcohol, stress or family problem on the SM survey were significantly less likely to agree that they had fully disclosed problems or concerns about alcohol use (ES=0.10). Finally, SMs who reported that they knew the clinician before the interview were significantly less likely to agree that they had fully disclosed any type of problem or concern (ES=0.15-0.23).

### **Unit Leadership Positively Associated With Several SM Attitudes Relevant to the PDHRA Process**

Boot-strapped t-tests were conducted for several of the non-scale items (see Table 6.6) and the survey scales. Only significant results are reported here; see Appendix V for the complete results. The results are presented in Table 6.9 below. Note that scales 4 (PDHRA self-disclosure) and 6 (Awareness of Others' Problems) were not included in these analyses.

Similar to the results presented in the previous section, unit leadership was positively related to SMs' attitudes on several scales. SMs reported more positive attitudes about post-deployment support and help seeking, unit cohesion for personal problems, and PDHRA leadership support when they had at least one NCO or Officer from their current unit in theater with them on their

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<sup>2</sup> Note that these three items were also grouped as Scale 4: PDHRA Self Disclosure. The items were analyzed individually here to determine if they acted differently depending on the type of problem.

last deployment. The same results were found for SMs who reported having had a unit NCO or Officer brief them on the PDHRA.

**Table 6. 9. Relationship between non-scale items and SM survey scales**

	Scale 1. Post- Deployment Support and Help Seeking	Scale 2. Unit Cohesion for Personal Problems	Scale 3. PDHRA Leadership Support	Scale 5. Satisfaction With the PDHRA Clinician	Scale 7. General Willingness to Self- disclose	Scale 8. Perceived Stigma Related to Disclosure	Scale 9. Barriers to Accepting Mental Health Referrals
Unit NCO/Officer in theater	More*	More*	More*	---	---	---	---
Unit NCO/Officer briefed on PDHRA	More*	More*	More**	---	---	---	---
Seeking promotion in next 6 months	---	---	---	---	---	More*	More*
Problem since deployment	Less**	---	---	Less*	Less**	More*	More*
Family or friends suggest seeking help	Less**	---	---	Less*	Less**	More*	More*

*Note: According to Cohen (1988, 1992), t-test effect sizes of about 0.2 are considered small; 0.5 are considered moderate; and 0.8 are considered large*

*\*= Small ES, \*\*=Moderate ES, \*\*\*=Large ES*

### **Seeking a Promotion, Having a Problem or Having Friends/Family Suggest Needing Help Negatively Associated With Several SM Attitudes Relevant to the PDHRA Process**

A negative influence on SM attitudes was found for three of the non-scale items. SMs who reported seeking promotion in the next six months reported more perceived stigma related to disclosure and more barriers to accepting mental health referrals. More stigma and barriers were also found for SMs who had family or friends suggest they seek help or confidentially reported an emotional, alcohol, stress, or family problem since returning from deployment. These SMs also reported less satisfaction with the PDHRA clinician, less post-deployment support and help seeking, and less general willingness to self-disclose. Notably, the effect sizes for these last two scales for both factors were in the moderate range, while all other effect sizes were small.

### **SMs With Problems who Talk to Friends or Family Experience Greater Post Deployment Support and are Generally More Willing to Self Disclose**

Finally, reported use of four formal and informal supports was related to SMs' attitudes on selected scales, as can be seen in Table 6.10 below. These items were only completed by SMs who reported experiencing an emotional, alcohol, stress, or family problem since returning from deployment. The two types of formal supports were talking to a medical or mental health professional. Both formal supports were associated with fewer barriers to accepting mental health referrals. SMs who had spoken with a mental health professional also reported more full disclosure on the PDHRA.

Informal supports included talking to a spiritual or religious leader and talking to family or friends. Both informal supports were associated with more positive attitudes toward post-deployment support and help seeking, satisfaction with the PDHRA clinician, and general

willingness to disclose. In addition, SMs who had spoken with family or friends reported more full disclosure on the PDHRA, less perceived stigma related to disclosure, and fewer barriers to accepting mental health referrals.

**Table 6. 10. Relationship between forms of support and SM survey scales**

Spoke with...	Scale 1. Post-Deployment Support and Help Seeking	Scale 4. PDHRA Self- disclosure	Scale 5. Satisfaction With the PDHRA Clinician	Scale 7. General Willingness to Self- disclose	Scale 8. Perceived Stigma Related to Disclosure	Scale 9. Barriers to Accepting Mental Health Referrals
Medical professional	---	---	---	---	---	Fewer*
Mental health professional	---	More*	---	---	---	Fewer*
Religious/Spiritual leader	More*	---	More*	More*	---	---
Family or friends	More***	More*	More*	More**	Less*	Fewer*

*Note: According to Cohen (1988, 1992), t-test effect sizes of about 0.2 are considered small; 0.5 are considered moderate; and 0.8 are considered large*

*\*= Small ES, \*\*=Moderate ES, \*\*\*=Large ES*

### ***Results – Section 2: SM Report of Problems on Survey Compared to PDHRA Self-report and Clinician Documentation of Major Concerns and Referrals***

#### **Twenty to forty percent of SMs Report an Emotional, Alcohol, Stress, or Family Problem on SM Survey but Not on PDHRA**

On the SM survey, SMs had the opportunity to anonymously report whether or not they had experienced an emotional, alcohol, stress, or family problem since returning from their last deployment (33.8% endorsed). Chi-squares were computed to determine if SMs reported these types of problems differently on the SM survey and the PDHRA. Table 6.11 through Table 6.16 shows the results of these analyses.

As seen in Table 6.11, clearly the majority of SMs who said they had an emotional, alcohol, stress, or family problem on the survey also reported one or more problems in any of these areas on the PDHRA. This is an encouraging finding that indicates that SMs report problems similarly whether on the anonymous SM survey or on the PDHRA.

**Table 6. 11. Percentage of SMs reporting/not reporting any behavioral problems on the PDHRA when they indicated that they did/did not have an emotional problem on SM survey**

Emotional, Alcohol, Stress, or Family Problem Since Deployment on SM Survey	Any Behavioral Problem Reported on PDHRA*			
	Yes		No	
	N	%	N	%
Yes	515	77.7%	148	22.3%
No	687	46.6%	788	53.4%

Note:  $\chi^2 = 179.75, p < .0001$

\*PDHRA behavioral problem defined as one or more items endorsed by the SM for PTSD, depression, and relationship conflict. In addition, the SM responses on the alcohol use items were consistent with a positive or negative response according to the algorithm described in Chapter 2.

However, over twenty percent of SMs did *not* report any such problem on the PDHRA. This indicates that a substantial minority of SMs report such problems anonymously, but not as part of the PDHRA process. There is an alternate explanation, hinted at by the 46.6% of SMs who reported one or more behavioral problems on the PDHRA but who said they did *not* have such a problem on the SM survey. It is possible that positive endorsement of one or more behavioral problems on the PDHRA reflected the SM's experience (e.g., feeling little interest or pleasure in doing things—a single item in the depressive symptoms scale), but these issues were not considered to be “an emotional, alcohol, stress, or family problem” as the question was worded on the SM survey. In either case it is also possible that SMs misunderstood the questions or there is some other as yet unidentified source of error.

Note that although the SM survey question grouped behavioral health and alcohol issues together, analyses were conducted separately for any behavioral health problem (PTSD, depression, or relationship conflict scales) and alcohol use problems. This was done because a positive endorsement of alcohol use problems is based in part on number of drinks (per the algorithm, see Chapter 2), and may or may not include a self-identified ‘problem.’ Further, review of each individual behavioral health and alcohol scale indicated there were a substantial number of SMs who endorsed PDHRA behavioral health symptoms but not alcohol.

Tables 6.12 and 6.13 present the results of the SM survey question by SM self-reported behavioral problems (not including alcohol use problems) and alcohol use problems alone as reported on the PDHRA. The percent of SMs who did not report any behavioral health symptoms on the PDHRA doubled to 42.6% compared to the results shown in Table 6.11. The picture is similar for alcohol use problems at 44.0%. This indicates that a large number of SMs report both some type of behavioral health problem on the PDHRA and meet the criteria for a potential alcohol use problem. However, the percentage of SMs who reported a problem on the PDHRA but not on the SM survey was very different: 13.1% of SMs for behavioral health problems and 40.4% of SMs for alcohol use problems. This suggests that many more SMs did not self-define themselves as having an alcohol use problem on the SM survey, whereas there were few SMs who did not self-define themselves as having a behavioral health problem.

**Table 6. 12. Percentage of SMs reporting/not reporting any behavioral problems (except alcohol) on the PDHRA when they indicated that they did/did not have an emotional problem on SM survey**

Emotional, Alcohol, Stress, or Family Problem Since Deployment on SM Survey	Any Behavioral Problem Reported on PDHRA (Not Alcohol)*			
	Yes		No	
	N	%	N	%
Yes	380	57.4%	282	42.6%
No	193	13.1%	1282	86.9%

Note:  $\chi^2 = 457.30, p < .0001$

\*PDHRA behavioral problem defined as one or more items endorsed by the SM for PTSD, depression, and relationship conflict.

**Table 6.8. Percentage of SMs reporting/not reporting alcohol problems on the PDHRA when they indicated that they did/did not have an emotional problem on SM survey**

Emotional, Alcohol, Stress, or Family Problem Since Deployment on SM Survey	Alcohol Problems Reported on PDHRA*			
	Yes		No	
	N	%	N	%
Yes	364	56.0%	286	44.0%
No	581	40.4%	857	59.6%

Note:  $\chi^2 = 43.95, p < .0001$

\*The SM response on the PDHRA alcohol use items were consistent with a positive or negative response according to the algorithm described in Chapter 2.

In sum, there are two main findings of interest. First, some SMs said they had a problem on the survey, which was anonymous, but NOT on the PDHRA. Twenty-two percent indicated a problem on the survey, but endorsed no behavioral health problems (including depression, PTSD, alcohol use, and relationship conflicts) on the PDHRA. When alcohol use was removed from behavioral health symptoms (because it seems particularly easy to flag an alcohol concern, which may bias these results), 43% of SMs who reported an emotional problem on the SM survey did not endorse any behavioral symptoms on the PDHRA. This suggests that these SMs may be deliberately not disclosing, or under-reporting, on the PDHRA.

### **PDHRA Clinical Interview Does Not Identify SMs Problems Reported on SM Survey but Not on PDHRA**

Although these SMs may be under-reporting on the self-report section of the PDHRA, one of the main purposes of the interview is to encourage greater self disclosure as well as to use clinical skills to identify problems that the SM may not disclose. To better understand this group of SMs, they were compared to SMs who had reported a behavioral health problem on the PDHRA and indicated a problem on the SM survey. Four items documented by the clinician as part of the PDHRA interview were compared for the two groups: number of major concerns, number of referrals, whether or not the SM received a medical referral, and whether or not the SM declined a referral. Note that the referrals could be for any problem, not just behavioral health issues. Also note that potential alcohol problems were not included in the creation of a behavioral problem because it may lead to an overestimation of actual problems, as seen in Chapter 7 and Chapter 8.

The general relationship between the two groups remained the same though, even when including alcohol (results not shown here).

As shown in Table 6.14, among SMs who had reported a problem on the SM survey, SMs who reported one or more behavioral health problems on the PDHRA received significantly more referrals and had more major clinician concerns than did SMs who did not report any behavioral health problems on the PDHRA. In addition, the latter group was more likely not to receive any medical referral at all. This suggests that SMs did not disclose their problems to the clinicians and that the clinicians did not discover SMs' problems.

However, SMs who indicated a problem on the PDHRA did not decline referrals significantly less often than those indicating no problems on the PDHRA. This suggests that when a referral is given, regardless of the SM self-report of problems on the PDHRA, the SM accepts the referral as appropriate. It should be noted that these results are limited by the small number of SMs who declined referrals. For the table below, only ten SMs declined a referral who reported one or more behavioral health problems on the PDHRA compared to nine SMs who reported no behavioral health problems.

**Table 6. 14. PDHRA clinician concerns and referrals for SMs who indicated an emotional, alcohol, stress, or family problem on the SM survey: Comparison between those who reported one or more similar problems on the PDHRA and those who reported none**

PDHRA Clinician Concerns and Documentation of Referrals	Problem Since Deployment on SM Survey									
	Behavioral Problem* (Except Alcohol) on PDHRA n=380				No Behavioral Problem* (Except Alcohol) on PDHRA n=282					
	Mean	SD	Min	Max	Mean	SD	Min	Max	p-value	ES
Number of major concerns	0.53	1.14	0	7	0.11	0.42	0	4	<.0001	0.54
Number of referrals	0.67	0.9	0	4	0.24	0.57	0	3	<.0001	0.59
Received medical referral	0.37	0.48	0	1	0.14	0.35	0	1	<.0001	0.48
Declination of referral	0.03	0.16	0	1	0.03	0.18	0	1	0.98	0.03

\*PDHRA behavioral problem defined as one or more items endorsed by the SM for PTSD, depression, and relationship conflict.

Second, some SMs said they did not have a problem on the survey, but did indicate a behavioral health problem (with the exception of alcohol use problems) on the PDHRA. Although a much smaller group (13.1%), these SMs may (a) not consider the problems reported on the PDHRA to be of concern, or (b) are over-reporting problems on the PDHRA.

As with the previous set of analyses, further exploration of this group was conducted by comparing clinician concerns and referral information documented on the PDHRA between those who indicated one or more behavioral health problems on the PDHRA and those who did not. As seen in Table 6.15 below, among SMs who did not report a problem on the SM survey, those who did report one or more problems on the PDHRA were more likely to receive a medical referral and had more major concerns and referrals than did SMs who reported no behavioral health problems on the PDHRA. These findings suggest that regardless of how they reported problems on the SM survey, SMs who reported behavioral health problems on the PDHRA may

not be over-reporting symptoms as assessed by the clinicians during the interview. Only two SMs who had reported one or more behavioral health problems on the PDHRA declined a referral compared to 18 who reported no behavioral health problems on the PDHRA.

**Table 6. 15. PDHRA clinician concerns and referrals for SMs who did not indicate an emotional, alcohol, stress, or family problem on the SM survey: Comparison between those who reported one or more similar problems on the PDHRA and those who reported none**

PDHRA Clinician Concerns and Documentation of Referrals	No Problem Since Deployment on SM Survey									
	Behavioral Problem* (Except Alcohol) on PDHRA n=193				No Behavioral Problem* (Except Alcohol) on PDHRA n=1,282					
	Mean	SD	Min	Max	Mean	SD	Min	Max	p-value	ES
Number of major concerns	0.17	0.54	0	4	0.08	0.33	0	5	0.02	0.21
Number of referrals	0.38	0.68	0	4	0.14	0.39	0	3	<.0001	0.45
Received medical referral	0.25	0.44	0	1	0.1	0.3	0	1	<.0001	0.41
Declination of referral	0.01	0.10	0	1	0.01	0.12	0	1	1.0	0.03

\*PDHRA behavioral problem defined as one or more items endorsed by the SM for PTSD, depression, and relationship conflict.

### ***Results – Section 3: Quasi-experimental Study of the Influence of Battlemind II Exposure on PDHRA Process***

VU conducted a quasi-experiment to explore the potential influence of viewing Battlemind II on factors measured by the SM survey. It should be noted that the initial intent was to conduct a randomized study; however, this was not deemed feasible by sites and thus was not able to be accomplished. Further, only two installations eventually were able to participate in the study.

Units of varying sizes were assigned to participate in study control or experimental conditions by scheduling them to undergo the PDHRA event on different days. SMs in the control condition were not exposed to a group-viewing of Battlemind II prior to the PDHRA (including completion of the SM self-report and the clinical interview). SMs in the experimental condition viewed Battlemind II as a group prior to completing the PDHRA SM self-report and clinical interview. The group viewing was typically conducted by a chaplain or other PDHRA personnel, and included viewing the Battlemind II video and related discussion. Note that SMs may have viewed Battlemind II previously either as individuals (on the website) or as a group during previous deployment-cycle education.

It should also be noted that for one site, the size of the experimental and control conditions were severely unbalanced (440 SMs in the control condition, 49 SMs in the experimental condition). Therefore, this site was not included in any analyses. For the single site included in final analysis, there were 501 SMs in the control condition and 265 SMs in the experimental condition. To the best of our knowledge there was no systematic way in which units were assigned to be exposed to Battlemind II before or after the completion of the PDHRA. This suggests the assignment as to when to be exposed to Battlemind II was haphazard, but not strictly random.

Finally, it should also be noted that covariates, (e.g., gender) were not included in analyses at this time, but future analyses would benefit from including such covariates.

### **SMs Participating in the Battlemind II Quasi-experiment are Different Than the Other SMs who Completed a SM Survey but did Not Participate**

Bootstrap t-tests were conducted and it was found that SMs participating in the Battlemind II quasi-experiment (N=766) have different demographic characteristics than rest of SMs completing the SM survey (N=5,924). This suggests that these findings cannot be generalized to the general SM population. It should be noted that although Battlemind II is primarily intended for Army components (including Active duty and Reserve/National Guard), it has been suggested that SMs in other branches may use this educational resource. Thus, the entire SM survey sample was included for these analyses. However, because participants in the quasi-experiment were all Army active duty SMs, certain characteristics of these groups are different from other SMs (e.g., Reserve component SMs are generally older than active duty SMs). See Table 6.16 below for the percentage of SMs in each demographic category. In this as subsequent tables, significant findings ( $p < 0.05$ ) are bolded.

**Table 6. 16. Demographic differences**

	SMs Not in Quasi-experiment			SMs in Battlemind II Quasi-experiment			p-value	ES
	N	Mean	SD	N	Mean	SD		
Proportion of SM age 18-24	5924	<b>38%</b>	48%	766	<b>43%</b>	50%	<b>0.02</b>	0.10
Proportion of SM age 25-29	5924	25%	43%	766	30%	46%	0.05	0.11
Proportion of SM age 30-39	5924	25%	43%	766	21%	41%	0.28	0.10
Proportion of SM age 40+	5924	<b>13%</b>	33%	766	<b>6%</b>	23%	<b>&lt;.0001</b>	0.25
Female	5756	8%	27%	741	7%	25%	0.91	0.04
Rank E1-E4	5789	<b>52%</b>	50%	743	<b>46%</b>	50%	<b>0.02</b>	0.12
Rank E5-E6	5789	31%	46%	743	36%	48%	0.04	0.11
Rank E7-E9	5789	7%	26%	743	7%	26%	1.00	0.00
Rank 01-03	5789	<b>6%</b>	23%	743	<b>9%</b>	28%	<b>0.02</b>	0.12
Rank 04-09	5789	2%	14%	743	1%	10%	0.35	0.08
Rank W1-W5	5789	1%	12%	743	1%	10%	0.92	0.00

### **Among SMs who Participated in the Battlemind II Quasi-experiment More Female SMs Were in the Treatment Condition**

SMs in the Battlemind II quasi-experiment had similar demographic characteristics except gender and to a lesser degree, rank. A larger percent of female SMs were exposed to Battlemind II than males; the odds ratio was 5.41, which means that female SMs were five times more likely to be exposed to Battlemind II than males while controlling for other demographic characteristics ( $p=0.001$ ). In addition, there were more SMs with a rank of W1 to W5 (warrant officer) who

were exposed to Battlemind II compared to those who were not. See Table 6.17 below for the means of each group and the results of the bootstrap t-tests.

**Table 6. 17. Demographic differences for SMs in quasi-experiment**

	No Battlemind II Before Self-report / Clinician Interview			Battlemind II Before Self-report / Clinician Interview			p-value	ES
	N	Mean	SD	N	Mean	SD		
Proportion of SM age 18-24	501	46%	50%	265	39%	49%	0.57	0.14
Proportion of SM age 25-29	501	29%	46%	265	31%	46%	1.00	0.04
Proportion of SM age 30-39	501	20%	40%	265	22%	42%	1.00	0.05
Proportion of SM age 40+	501	5%	21%	265	8%	26%	0.59	0.13
Female	485	<b>3%</b>	17%	256	<b>14%</b>	34%	<b>&lt;.0001</b>	0.43
Rank E1-E4	485	46%	50%	258	46%	50%	1.00	0.00
Rank E5-E6	485	36%	48%	258	37%	48%	1.00	0.02
Rank E7-E9	485	7%	26%	258	7%	25%	1.00	0.00
Rank O1-O3	485	9%	29%	258	7%	26%	0.97	0.07
Rank O4-O9	485	1%	10%	258	1%	9%	1.00	0.00
Rank W1-W5	485	<b>0%</b>	5%	258	<b>2%</b>	15%	<b>0.04</b>	0.20

### **SMs Exposed to Battlemind II had More Positive Attitudes Relevant to the PDHRA Process**

Regression models were estimated to determine if being exposed to Battlemind II affected SM attitudes relevant to the PDHRA process, as measured by the SM survey scales. The results show that exposure to Battlemind II had a positive relationship with five of the SM survey scales. SMs who viewed Battlemind II had more positive attitudes toward post-deployment support and help seeking, were more satisfied with the PDHRA clinician, and were more willing to self-disclose problems in general. In addition, SMs exposed to Battlemind II reported less perceived stigma related to disclosure and fewer barriers to accepting mental health referrals. It should not be expected that exposure would affect unit cohesion or leadership but should have an influence on PDHRA self disclosure, and awareness of others' problems. However, no group differences were found for these two scales. It should be noted that the impact of Battlemind II on all significant SM survey scales was very small (effect sizes ranged from 0.01-0.03). Complete results are shown in Table 6.18 below.

**Table 6.18. Influence of Battlemind II on SM perceptions**

	No Battlemind II Before Self-report / Clinician Interview					Battlemind II Before Self-report / Clinician Interview					p- value
	N	Mean	SD	Min	Max	N	Mean	SD	Min	Max	
Scale 1. Post-deployment support and help seeking	496	<b>3.40</b>	0.52	1.5	5	260	<b>3.52</b>	0.55	1.2	5	<b>0.00</b>
Scale 2. Unit cohesion for personal problems	495	3.57	0.93	1	5	264	3.64	0.87	1	5	0.34
Scale 3. PDHRA leadership Support	494	3.47	0.72	1	5	265	3.56	0.66	1	5	0.09
Scale 4. PDHRA self disclosure	475	3.45	0.97	1	5	258	3.58	0.96	1	5	0.07
Scale 5. Satisfaction with the PDHRA clinician	465	<b>3.44</b>	0.69	1	5	256	<b>3.69</b>	0.69	1	5	<b>&lt;.0001</b>
Scale 6. Awareness of others' problems	497	3.51	0.68	1	5	263	3.56	0.68	1	5	0.35
Scale 7. General willingness to self-disclose	498	<b>3.00</b>	0.76	1	5	265	<b>3.18</b>	0.81	1	5	<b>0.00</b>
Scale 8. Perceived stigma related to disclosure	497	<b>3.02</b>	0.98	1	5	265	<b>2.77</b>	0.94	1	5	<b>0.00</b>
Scale 9. Barriers to accepting mental health referral	496	<b>2.85</b>	0.65	1	5	262	<b>2.64</b>	0.71	1	5	<b>&lt;.0001</b>

Note: Nine models were estimated- one per SM survey scale

Effect size of scale 1=0.01; scale 5=0.03; scale 7=0.01; scale 8=0.01 and scale 9=0.02

### **Exposure to Battlemind II was Not Related to SMs Reporting an Emotional, Alcohol, Stress, or Family Problems on the Survey**

Given the results shown above, it may be expected that SMs exposed to Battlemind II would be more likely to report problems, since they report more general willingness to self-disclose. Additionally, Battlemind II education is intended to increase self awareness of potential problems that may be experienced during reintegration as well as decreasing stigma associated with such problems. Therefore, the influence of exposure to Battlemind II was tested by comparing SMs who had reported an emotional, alcohol, stress, or family problem on the SM survey to those who did not report such a problem. In addition, comparisons were made between SMs who had family or friends suggest they seek help for these types of problems and those who had not. The results are presented in Table 6.19.

It might be hypothesized that SMs exposed to Battlemind II may be more aware of problems and thus more likely to report them, but this does not appear to be the case. Bootstrap t-tests revealed that SMs did not report an emotional, alcohol, stress, or family problem differently on the SM survey depending on whether or not they were exposed to Battlemind II. Twenty-four percent of SMs reported that they had an emotional, alcohol, stress, or family problem and were not exposed to Battlemind II; 25% reported such a problem and were exposed to Battlemind II. In addition, SMs did not report that friends or family suggested they seek professional help

differently depending on their exposure to Battlemind II (21% did not see Battlemind II, 16% saw Battlemind II).

**Table 6. 19. Percentage of SMs reporting a problem or families' suggesting help by Battlemind II exposure**

Questions 50-51 on SM Survey	No Battlemind II Before Self-report / Clinician Interview			Battlemind II Before Self-report / Clinician Interview			p-value	ES
	N	Mean	SD	N	Mean	SD		
Experienced emotional, alcohol, stress, or family problem	495	24%	43%	261	25%	43%	1.00	0.02
Friends or family suggested SM seek professional help	460	21%	41%	247	16%	37%	0.66	0.13

### SMs Exposed to Battlemind II Report on the Survey That They More Fully Disclosed Problems on the PDHRA

In an attempt to understand if SMs disclose differently depending on the type of problem, the three types of disclosure - physical, emotional, and alcohol use - were analyzed separately. Bootstrap t-tests revealed that SMs' exposed to Battlemind II agreed more often that they fully disclosed (i.e., were candid on the PDHRA) emotional problems, physical health problems, and alcohol use problems than SMs who did not see Battlemind II. Table 6.20 below shows the percentage of SM endorsing each response by whether or not they were exposed to Battlemind II.

**Table 6. 20. Percentage of SMs agreeing, disagreeing, and neither agreeing or disagreeing with disclosure questions by Battlemind II exposure**

Questions 56-58 on SM Survey	No Battlemind II Before Self-report / Clinician Interview			Battlemind II Before Self-report / Clinician Interview			p-value	ES
	N	Mean	SD	N	Mean	SD		
Disclosed physical health concerns								
Disagree	504	14%	35%	267	13%	34%	1.00	0.03
Agree	504	55%	50%	267	66%	47%	0.02	0.23
Neither Agree Nor Disagree	504	26%	44%	267	18%	38%	0.08	0.20
Disclosed emotional health concerns								
Disagree	504	17%	38%	267	16%	37%	1.00	0.03
Agree	504	50%	50%	267	62%	49%	0.02	0.24
Neither Agree Nor Disagree	504	27%	45%	267	19%	39%	0.06	0.19
Disclosed alcohol use health concerns								
Disagree	504	16%	37%	267	16%	37%	1.00	0.00
Agree	504	52%	50%	267	65%	48%	0.01	0.27
Neither Agree Nor Disagree	504	27%	44%	267	16%	36%	0.01	0.28

Note: Q56 Chi-Square = 8.64, p=0.01; Q57 Chi-Square = 9.60, p=0.008; Q58 Chi-Square = 13.9, p=0.001

## ***Conclusions***

The SM survey provided important insight regarding SM attitudes toward the PDHRA process and self-reported characteristics that may influence how they perceive the PDHRA process. Across all nine scales measuring attitudes relevant to the PDHRA process, overall SMs responses were generally neutral to positive. However, a substantial minority (10 – 14%) of SMs admits to not fully disclosing physical, emotional, or alcohol use problems on the PDHRA, and another quarter of SMs chose not to indicate the status of their disclosure. This suggests that while most SMs indicated they were open about important health concerns on the PDHRA, a sizeable segment were not.

Specific barriers to SM-reported disclosure of emotional, physical, and alcohol use problems on the PDHRA were identified. SMs who were familiar with the PDHRA clinician were less likely to fully disclose any of these problems. SMs who were seeking promotion in the next six months were less likely to fully disclose emotional problems on the PDHRA. SMs who anonymously reported having an emotional, alcohol, stress, or family problem were less likely to agree that they had fully disclosed problems or concerns about alcohol use. In addition, seeking a promotion, reporting a problem on the survey, and having friends or family suggest getting help for problems were all associated with more negative attitudes relevant to the PDHRA process.

On the other hand, post-deployment support was found to consistently correlate with the other SM survey scales, which indicates the importance of positive attitudes in general and specifically toward the PDHRA process. PDHRA leadership support and unit cohesion for personal problems were related to satisfaction with the PDHRA clinician and general willingness to self-disclose, suggesting that SMs are more prone to disclosing their concerns and are more pleased with their clinicians when their leaders and units are supportive. Importantly, unit leadership was also associated with reduced stigma related to disclosure and fewer barriers to accepting a mental health referral. In addition, SMs rated PDHRA leadership support higher when a unit leader had briefed them on the PDHRA and when a current unit leader had been in theater with them. This suggests that unit leaders could play a potentially stronger role in encouraging SM openness during and acceptance of referrals resulting from the PDHRA.

All SMs were asked whether they had read or viewed written materials, films or videos, and websites related to deployment cycle education. About half or less had used any of these types of education materials; but among those who did, the large majority found them useful. Also, most SMs reported that a unit leader had briefed them on the PDHRA. All of these forms of education were found to be linked to greater disclosure on the PDHRA as reported by SMs. This suggests the need for an increased emphasis on PDHRA education, particularly including unit leader involvement, prior to SMs engaging in the PDHRA process.

According to the SM survey, which was anonymous, almost forty percent of SMs reported experiencing an emotional, alcohol, stress, or family problem and/or had friends or family suggest they seek help for such a problem. The majority of these SMs reported talking to informal supports, such as family or friends, with fewer seeking help from formal supports like medical or mental health professionals. Of note to the PDHRA process, it appears that SMs who seek formal sources of support are different from those who seek informal sources of support. In other words, SMs choose different pathways for support based on personal preferences.

Further, SMs who anonymously reported a problem or had friends/family suggest they seek help were more negative about several attitudes related to the PDHRA process. They experienced less post-deployment support and help seeking, satisfaction with the PDHRA clinician, and general willingness to self-disclose. They also reported more perceived stigma related to disclosure and barriers to accepting a mental health referral. Yet, among those SMs with problems, those who sought informal support from family or friends experienced greater post deployment support and indicated that they were more willing to fully disclose on the PDHRA (among other positive attitudes relevant to the PDHRA process). Thus, it may be useful to consider PDHRA-specific education targeted towards religious and spiritual leaders and SMs' families to increase awareness of the PDHRA as a helpful source of support.

As stated previously, VU was not able to do the complex statistical modeling needed to fully explore all these interrelationships between SM self-reported characteristics and attitudes relevant to the PDHRA process as they influenced actual behavior on the DD Form 2900 itself. However, the simple models that were constructed provide intriguing results that strongly indicate further analysis is needed. Depending on whether alcohol use problems were included in the analysis, anywhere from twenty to forty percent of SMs who reported an emotional, alcohol, stress, or family problem on the survey did not report similar problems on the self-report section of the PDHRA itself (including items related to PTSD, depression, and relationship conflicts). Further, clinician concerns and referrals depended on whether or not these problems were reported on the DD Form 2900. In other words, it appears that the SMs did not disclose these problems during the interview and the clinician did not detect them, thus not leading to greater concerns or referrals. While these analyses are by no means conclusive, these findings do seem to indicate that some SMs not only have negative attitudes to the PDHRA, but also exhibit behavior suggestive of under-reporting. It is our strong recommendation that further exploration of these data occur to more fully understand the implications of these results before policy recommendations can be made.

Finally, the last set of findings is related to the influence that group exposure to Battlemind II and related discussion has on SM attitudes and characteristics relevant to the PDHRA process. These findings are limited by the quasi-experimental design and the fact that SMs from only one installation could be retained for analysis. The results indicate that Battlemind II may have an important effect on SM attitudes toward the PDHRA process. Compared to SMs who were not exposed to Battlemind II prior to completing the PDHRA self-report or the clinical interview, SMs who were exposed reported more post-deployment support and help seeking, satisfaction with the PDHRA clinician, general willingness to self-disclose, less perceived stigma related to disclosure, and fewer barriers to accepting mental health referrals.

However, no effect of Battlemind II exposure was found for PDHRA self-disclosure or reporting an emotional, alcohol, stress, or family problem on the survey. Yet, when PDHRA self-disclosure was analyzed as three separate questions, it was found that a greater percentage of SMs exposed to Battlemind II agreed that they had fully disclosed any type of problem on the PDHRA compared to those who were not exposed. Clearly, further analysis is warranted, particularly looking at actual behavior of SMs as documented on the DD Form 2900. It does appear that Battlemind II has some important positive effects on attitudes relevant to the PDHRA

process, which supports an increased emphasis on such post-deployment cycle education for SMs conducted in conjunction with the PDHRA process.

### **Relationship to Other Evaluation Findings**

It was reported in this chapter that there were significant differences in SM survey responses by installation, but these differences were small. In addition, differences among installations were revealed by observations and interviews reported in chapter 10. Thus, differences among installations may explain some of the variance in PDHRA referrals as described in chapter 4.

Also, it was found that many SMs who admitted problems on the SM survey reported seeking help from informal sources (e.g., family or friends). Although speculative, this may explain the result reported in chapter 5 showing that declination of referral on the PDHRA was not dependent on the occurrence of health care encounters (HCE) between the PDHA and PDHRA. Perhaps SMs decline referrals because they would rather seek help from family or friends. Furthermore, the present chapter shows that SMs who reported problems on the SM survey have more negative attitudes toward help seeking and accepting help; this may also explain the lack of a relationship between HCE and declining referrals.

A significant minority of SMs admitted to not fully disclosing alcohol, family, stress, or emotional problem on the PDHRA. Furthermore, SMs who did not endorse behavioral health symptoms on the PDHRA, despite admitting to a problem on the SM survey, had fewer clinician concerns and referrals, suggesting that clinicians did not discover the SMs' problems. This relates to the finding reported in chapter 7 that some clinicians do not ask about mental health problems unless endorsed by the SM. It also confirms the opinion of clinicians interviewed in chapter 10, who estimated that up to a third of SMs do not fully disclose on the PDHRA, especially regarding mental health or alcohol use problems.

### **Limitations and Directions for Future Research**

As stated previously, given the convenience sampling strategy, this chapter's findings are not generalizable to the larger military population. It seems clear that the primary direction for future research would be additional analyses that explore the relationships among SM attitudes and characteristics assessed on the VU survey and actual behavior as documented on the DD Form 2900. In addition, inclusion of health care utilization data would provide further important information.

Finally, it should also be noted that covariates, (e.g., gender) were not included in analyses at this time, but future analyses would benefit from including such covariates. For example, a larger percentage of females were exposed to Battlemind II than males, and this difference may impact the results, but this question cannot be answered without more complex analyses (i.e., using covariates).

## **Chapter 7: Variability in Content Discussed and Communication Patterns Used by Clinicians During PDHRA Interviews**

### ***Introduction***

#### **Background and Significance**

After Service members (SMs) complete the self-report section of the DD Form 2900, or Post-Deployment Health Reassessment (PDHRA), they participate in a clinical interview where the clinician reviews the SM's self-report, conducts a risk assessment, and makes a judgment about whether to refer the SM for further evaluation and treatment. This clinical interview is a key stage in the PDHRA process, but little is known about the clinical decision making process in this context. Guidelines for PDHRA clinicians are available on the military health web site [www.pdhealth.mil](http://www.pdhealth.mil). Although not explicitly stated, a review of these guidelines reveals four underlying goals of the clinical interview. The four goals are: (1) to clarify and confirm responses on the DD Form 2900, (2) to educate SMs about concerns, healthcare, and treatment options, (3) to conduct a risk assessment, and (4) to make referrals for further evaluation where warranted. While the clinician records the outcome of the interview by noting concerns and referrals on the PDHRA, it is not known what happens during the interview and thus the clinical interview remains a 'black box'. It is believed that the interaction between the clinician and SM affects the way in which the above stated goals of the PDHRA are accomplished. Examining the content of the interview and the communication patterns of clinicians during these interviews can provide insight into how the clinical interview contributes to the PDHRA process.

#### **Objective**

This chapter explores the content and communication patterns observed during PDHRA clinician interviews to understand how the above stated goals of the PDHRA are accomplished. The Active component does not record PDHRA interviews, nor was it deemed feasible to record or observe any face-to-face PDHRA assessments for this study. De-identified audio recordings of PDHRA interviews were obtained from the DoD-contracted agency that conducts and, for quality assurance purposes, routinely records telephonic PDHRA interviews with SMs in the Reserve and National Guard. These recordings were analyzed for content (what was discussed and asked) and communication patterns used by the clinician. The PDHRAs associated with a subset of calls were also analyzed to understand how the documentation of the forms related to the recordings.

#### **Study Design and Aims**

The interviews were analyzed using two separate coding systems. Vanderbilt developed and implemented a coding system to answer research questions related to the PDHRA-specific content areas discussed during the interviews. Additionally, calls were coded for communication patterns by our subcontractor, RIASWorks, using an established system of coding patient-clinician interactions. This coding system was not specific to the PDHRA. Study aims included: (1) describe the content of the interview and determine how it relates to PDHRA outcomes, and (2) describe the clinician communication patterns and determine how they relate to PDHRA outcomes.

## ***Methods***

### **Data Sources**

#### ***Recorded PDHRA Interviews***

The DoD-contracted agency that provides PDHRA screening for SMs in the Reserve and National Guard has two call centers where SMs can call in to speak with a clinician after completing the self-report section of the PDHRA. At the request of DoD, this agency provided Vanderbilt University (VU) with the following information for all PDHRA interviews completed by their call center clinicians between July 15, 2008 and August 27, 2008 (n=6,658): tape ID, clinician/agent ID, start date and time of the call, end date and time of the call, and duration of the call in minutes and seconds. VU selected calls from this sample for analysis, as described below.

#### ***Sampling Strategy***

Calls were selected using a multistage (i.e., stratified and clustered) sampling method. Calls less than 2 minutes long were considered likely hang-ups or agreements to complete the assessment at a later date and therefore eliminated from the sample, leaving 5,927 calls. Calls were then stratified according to the 75<sup>th</sup> percentile of call duration (6.22 minutes). If a clinician had fewer than 20 calls in the sample, all of that clinician's calls were selected. Clinicians who had more than 20 calls had five calls randomly chosen that were shorter than the 75% cut-off and four calls chosen at random that were above the cut off. Using this approach, the sample included a large number of longer calls, more than would have been selected using simple random sampling. A total of 335 calls were selected. These calls were de-identified by the contracted agency prior to being sent to VU researchers. De-identification included removing audible social security numbers (SSNs) and SM names so that these portions of recordings were silent.

Calls were removed from the sample if they did not contain a complete PDHRA interview (n=21) or if the deployment location was identified as not being OIF or OEF (n=42). At this stage the sample included 272 calls.

#### ***Linked DD Form 2900***

The contracted agency provided the SSNs and tape IDs associated with each of the chosen calls to the individual at DoD providing the PDHRA data to VU. This individual used these data to link the calls to the corresponding PDHRAs (as described in Chapter 3). Since the SSNs were sent directly to DoD, Vanderbilt never had possession of any identifying information about the SMs. Unfortunately, SSNs were not recorded by the contracted agency for 66 of the calls, so these calls could not be matched to a PDHRA. Furthermore, matches were only retained if the date of the clinician interview call was within 7 days of the date of clinician endorsement on the PDHRA form, and if the PDHRA was the January 2008 version. In total, 54 calls were removed for not meeting the '7 day' criterion and six were removed due to linking to the 2005 version PDHRA. The final PDHRA-linked data set included 146 recordings linked to the January 2008 version PDHRAs.

### **Measures**

#### ***RIAS Coding***

The entire sample (n=272) was sent to RIASWorks for coding. RIASWorks specializes in coding verbal communication in medical encounters between physician and patient. For this project they

content coded the nature and quality of the socio-emotional exchange and task-oriented exchange between SMs and clinical interviewers recorded on audiotape. The content coding system is called the Roter Interaction Analysis System (RIAS). It is an internationally recognized instrument that has emerged as the most widely used system for coding communication in medical encounters. The RIAS (<http://www.rias.org>) was loosely derived from social exchange theories related to interpersonal influence, problem solving, and reciprocity and can be used with audiotapes or videotapes. Roter and Larson (2002) provide detailed information regarding the: (a) practicality, (b) functional specificity, (c) reliability, and (d) predictive validity of the RIAS, so this information is not discussed in detail here. For example, Roter and Larson (2002) report that RIAS reliability averages 0.85 for both patient and physician categories based upon the Pearson correlation coefficient ( $r$ ), and this reliability remains in the acceptable range after instrument translation to many European languages.

The RIAS focuses on two broad categories of communication patterns: (a) socio-emotional exchange and (b) task-focused exchange (similar to Gallagher, Hartung & Gregory's, 2001 approach). Task-focused exchanges have to do with the interview process (e.g., asking questions about previous treatment or giving medical information); while socio-emotional exchanges are more personal (e.g., laughing or making an empathic statement). Within each of the two categories, numerous codes can be used to identify the nature of information given and received as well as the general tone of the medical encounter. For example, "Alright, it says here your health is excellent" is a task oriented statement, while "That would be depressing" is an example of a socio-emotional statement (see Appendix W for copy of the RIAS Coding Manual). Although we describe all of the RIAS variables below, the main analyses focus on 'rapport building' variables (see Table 7.1) since these were not assessed through the Vanderbilt Internal Coding System (VICS), described below.

Using the RIAS, utterances or thought units (information events; Waitzkin, 1985) are analyzed as the smallest units of verbal communication patterns. Coding is done directly from recording media (electronic audio files in this case), which eliminates the transcription step and allows for incorporation of voice tone and phrasing cues in assigning appropriate codes. The RIAS manual provides instructions about how to code all utterances or information events on an audio or videotape into 39 mutually exclusive categories. Criticisms of the RIAS include issues such as: (a) not coding sequences within topics, (b) not coding patient's signals of interest/attentiveness, and (c) not coding interruptive speech (See Debra Roter & Larson, 2002; Sandvik, et al., 2002). These limitations do not hinder the analyses presented here.

### ***RIAS: Description of Variables and Categorization***

Due to the large number of communication variables coded by RIAS, VU created an organizing scheme with three categories: Rapport Building, Asks Questions, and Gives Information. All of the variables analyzed were clinician-related, i.e., utterances made by the clinician. Table 7.1 presents all 35 clinician-related RIAS variables in the three categories described. Note that five variables in the 'asking questions' section are composites of open ended and closed ended questions; all the other variables are individual RIAS variables.

**Table 7. 1. Description and Examples of RIAS Variables**

<b>RIAS Variable (Clinician)</b>	<b>Description<sup>1</sup> (Example)</b>
<b><i>Rapport building category</i></b>	
Makes personal remarks	Social conversation that is not about the task at hand, and not about the patient's lifestyle ("The Broncos are having a really great season this year." "Enjoy the rest of your day <sup>2</sup> .")
Expresses direct approval to SM	Compliments, gratitude, respect, or admiration directed to the SM ("I'd like to thank you for your time and service <sup>2</sup> .")
Reassures, optimism	Optimism, encouragement, relief of worry, reassurance – these are more intensely personal than approval statement - and reflects the clinician's feelings at this point in time ("That's why we recognize that it's important to do it now <sup>2</sup> ." "I'm glad it worked out <sup>2</sup> .")
Expresses concern, worry	Statements that indicate an event is serious, worrisome, distressing, or deserving of special attention – voice tone and verbal content are used ("I'm concerned with your dizzy spells.")
Shows agreement, understanding	Signs of agreement or understanding – this includes social amenities and apologies ("You were right." "Oh, I see.")
Laughs, tells jokes	Friendly jokes, good natured-teasing, and all forms of laughter
Makes partnerships statements	Statements that convey the clinician's alliance with the SM in terms of help, support, decision-making, or the development of a therapeutic plan ("I could give you the phone number [to Military OneSource]; if you feel that would be helpful to you <sup>2</sup> .")
Self-discloses	Statements that describe personal experiences that may have medical or emotional relevance to SM – this is different from personal statements which are general 'chit chat' ("I'm a reservist <sup>2</sup> ." "I've been to Fort Bliss <sup>2</sup> .")
Makes general compliment	Compliments, gratitude, respect, or admiration directed to another – like a doctor, lab, VA – not present during the interview ("The VA does excellent work.")
Makes legitimating statements	Statements that the SM's emotional situation, actions, or thoughts are understandable and universal ("I can see why you're having trouble sleeping." "Who wouldn't have been affected by that experience?")
Makes empathy statements	Statements that paraphrase, name, or recognize the emotional state of the SM during the interview ("This is distressing for you, I understand." "That would be depressing." <sup>2</sup> )
<b><i>Asks questions category</i></b>	
Paraphrases, checks for understanding	Questions or statements where the clinician re-states or reflects back information that he/she has been told by the SM or confirming a shared understanding of the facts being discussed ("You were deployed to Iraq in 2003-2004 <sup>2</sup> ." "You report no TBI <sup>2</sup> .")
Asks any psychosocial question <sup>3</sup>	Open or closed ended questions related to psychosocial concerns or problems, including stress, feelings, emotional, general state of mind, philosophical outlook, value and beliefs ("Are you still feeling depressed?" "Over the past couple months have you ever had any thoughts that you might hurt yourself?" <sup>2</sup> )
Asks any lifestyle question <sup>3</sup>	Open or close ended questions relating to lifestyle (smoking, exercise), family and home situations, work or employment, prevention, self-care issues, and health care costs/money. ("What Branch of service do you belong to?" <sup>2</sup> "Are you able to work?" <sup>2</sup> )
Asks any medical question <sup>3</sup>	Open or close ended questions about medical and family histories, previous treatment, symptoms, physical condition, practices related to the medical condition, and allergies ("What kind of injury was it?" <sup>2</sup> "The chemical injury – you still having problems with that?" <sup>2</sup> )

<b>RIAS Variable (Clinician)</b>	<b>Description<sup>1</sup> (Example)</b>
Back-channels	Indicators of sustained interest while the SM is talking, encouragement to continue (“Mmm-huh” “Right [go on]...”)
Asks for opinion	Questions that ask for the SM’s opinion or point of view relating to evaluation or treatment (“Now lastly, do you need a referral for any deployment-related health concern?” <sup>2</sup> “Do you have any questions?” <sup>2</sup> )
Asks for understanding	Quick check with the SM to see if the information that was just said has been understood (“OK?” <sup>2</sup> “Are you clear on this?”)
Asks any therapeutic regimen question <sup>3</sup>	Open or closed questions about past, ongoing, or future drug regimens, ongoing or future treatment practices, and lifestyle controls that have been explicitly linked to the SM’s medical condition (“Are you being seen by a counselor [for the PTSD problem]?”)
Asks any other question <sup>3</sup>	Open or close ended questions that are related to the interview but do not fall into one of the four subcategories: medical, therapeutic regimen, lifestyle, and psychosocial (“Do you have a paper and pencil handy?” <sup>2</sup> )
<b><i>Gives information category</i></b>	
Gives orientation, instructions	Statements that tell the SM what is about to happen (“I’m ready for your social – go ahead” <sup>2</sup> “It’s just taking a few minutes to load up my screen here.” <sup>2</sup> )
Gives lifestyle information	Statements of fact or opinion relating to lifestyle (smoking, exercise), family and home situations, work or employment, disease prevention, self-care issues, and health care costs/money (“[A VA card is] like insurance pretty much.” <sup>2</sup> )
Gives therapeutic regimen information	Statements of fact or opinion relating to ongoing or future treatment plans – such as specific treatment plans or test to be performed; also statements about documentation of current visit (“Let me go ahead and generate an LOD for the symptoms you want to be seen for.” <sup>2</sup> “I noted about the rash and the knee.” <sup>2</sup> )
Counsels lifestyle / psychosocial	Statements about lifestyle, family, activities of daily living, work and employment, health promotion and prevention, and psychosocial issues that suggest the SM take action or make changes in behavior – this is different from the giving information categories in that it is characterized by the intent to persuade, influence, or direct the SM (“Visit Military One Source.com online.” <sup>2</sup> “I want you to have a safety net and phone numbers.” <sup>2</sup> )
Counsels medical / therapeutic regimen	Statements about medical problems, drug regimens, future appointments, and tests that suggest the SM take action or make changes in behavior – this is different from the giving information categories in that it is characterized by the intent to persuade, influence, or direct the SM (“If you need to call back [about the rash], [the VA] is there.” <sup>2</sup> “Take [the printout of the LOD] to the VA and go ahead and make yourself an appointment.” <sup>2</sup> )
Gives psychosocial information	Statements of fact or opinion relating to psychosocial concerns or problems, including stress, feelings, emotional, general state of mind, philosophical outlook, value and beliefs (“Drug abuse may be symptomatic of a deeper emotional problem.” “It seems like things are getting better for you and your wife.”)
Gives medical information	Statements of fact or opinion relating to medical and family histories, previous treatment, symptoms, physical condition, practices related to the medical condition, and allergies (“You definitely have the symptoms [for PTSD].” <sup>2</sup> )

RIAS Variable (Clinician)	Description <sup>1</sup> (Example)
Gives other information	Statements of fact or opinion relating to the interview but do not fall into one of the 4 subcategories: medical, therapeutic regimen, lifestyle, and psychosocial (“We’ll be tape recording today only.”)
<b>Other / Miscellaneous</b>	
Uses transitions	Sentence fragments that indicate movement to another topic; included fragments that are place-holders, if the utterance is separated from other utterances by a pause of one second or more (“Ah...wait a minute now...” “Let’s see.”)
Bids for repetition	Clinician requests repetition of the SM’s previous statement – usually because it has not been clearly heard (“What did you say?” “I didn’t quite get that last part.”)
Makes unintelligible utterance	RIAS coder was unable to understand what the clinician said
Asks for permission	Questions that specifically ask for permission to give information or to proceed (“Would you like me to give you that phone number?” <sup>2</sup> )
Expresses direct disagreement to SM	Any indication of disapproval, criticism, or complaint directed at the SM – also includes sarcasm (“That’s impossible.”)
Ask for reassurance	Question of concern that convey the need or desire to be reassured or encourages – uses voice tone and emotional content to distinguish from other questions (“Are you sure that you’re going to call the VA?” “Can you reassure me that you are going to call someone if [those thoughts] don’t get better?”)
Expresses general criticism	Any indication of disapproval, criticism, or complaint directed to another – like a doctor, lab, VA – not present during the interview – also includes sarcasm (“I just don’t like the way they run things up there.”)

<sup>1</sup> Some descriptions are taken directly from the RIAS manual, while others are paraphrased and adapted for easier understanding within the context of the PDHRA process. For the official descriptions see Appendix W

<sup>2</sup> Indicates that this is an actual quote from the call data

<sup>3</sup> These are composite scores of raw RIAS data; Open ended questions and Close ended questions for this category were combined into an ‘any’ variable (i.e., ‘Asked open ended psychosocial questions’ + ‘Asked close ended psychosocial questions’ = ‘asks any psychosocial questions’)

### **RIAS: Inter-Coder Reliability Correlations (ICRC)**

RIAS double coded 31 calls and reported their ICRC for all variables. Higher correlations indicate greater agreement between raters; a correlation of 1 indicates that raters agreed perfectly on the frequency of a variable for all 31 calls.

The majority of variables used in this analysis had very high correlations ( $r \geq 0.8$ ) between raters. However, some of the variables have low or no ICRC reported. This was most likely due to the extreme variation in communication patterns that exist in these calls. For example, low ICRC for ‘makes legitimizing statements’ ( $r = 0.47$ ) and ‘self-discloses’ ( $r = 0.05$ ), is probably a reflection of these variables occurring only once or twice in the 31 calls sampled for inter-coding analysis. When the occurrence of this communication variable is infrequent, even one disagreement between raters can lower ICRC considerably. Additionally, if one or both raters coded frequency counts of zero for all 31 calls used in the ICRC analysis (as with ‘asked open ended other question’ and ‘makes empathy statement’), then a correlation could not be computed.

Since RIAS has consistently been shown to have reliability averages 0.85 for both patient and physician categories, all variables were used in descriptive analyses (Roter & Larson, 2002). Variables that were used for significance testing all had ICRC above 0.89.

***Vanderbilt Internal Coding System (VICS): Description and Development***

Since RIAS does not code for content (i.e., what specific topics were discussed), VU developed a codebook to quantify specific areas of discussion related to the PDHRA process (see Appendix X for codebook).

A preliminary codebook was created based on the four underlying goals of the PDHRA interview: (1) to clarify and confirm responses on the DD Form 2900, (2) to educate SMs about concerns, healthcare, and treatment options, (3) to conduct a risk assessment, and (4) to make referrals for further evaluation where warranted. As mentioned above, these goals were created after reviewing PDHRA clinician training material available at [www.pdhealth.mil](http://www.pdhealth.mil), and in consultation with the DoD Task Manager for this study. The goal was to develop a codebook to quantify whether these goals were being met during the interview. An iterative process was used to develop the codebook including (1) independent coding of selected sample calls by two raters, (2) team discussion and review, (3) codebook revision, and further testing using all three steps. Fourteen calls were used in the development process.

***Vanderbilt Inter Coding System (VICS): Inter-rater Reliability (IRR)***

Once the final codebook was created, the same two coders coded an additional 30 new calls selected randomly from the sample of calls linked to the PDHRA (n=146). Percentage agreement and Cohen's Kappa coefficient were calculated. According to Landis and Koch (1977), a Kappa of 0.61 – 0.80 should be considered to reflect substantial agreement among raters, and a score of 0.81 – 1.0 should be considered almost perfect agreement. However, due to the nature of Cohen's Kappa, and the way the procedure controls for chance, it cannot be computed if either of the following is true: (1) one or both coders score an item entirely as one response (e.g., Question A was coded as 'yes' for all 30 calls) or (2) one coder recorded a response choice that the other coder did not use for the same item (e.g., for Question A coder #1 coded a "yes" for one or more calls but coder #2 never coded a "yes" for this question). Therefore, out of the 191 questions on the coding document for which IRR should have been calculated (text field questions and opinion questions were not analyzed); Cohen's Kappa could not be computed for 81 of them. For these questions we relied on percentage agreement (number of agreements / 30 [calls]) to express IRR. Encouragingly, the majority of these calls had 100% agreement. The lowest percentage agreement for any of the 191 questions was 83.3%; which shows high agreement between coders.

The overall Cohen's Kappa across the remaining 110 items was 0.87 (Std. Error = 0.07), reflecting nearly perfect agreement between coders on measurable items. When looking at individual questions, we used the suggested interpretations of Landis and Koch (1977), and decided that a Kappa value less than 0.8 would be discussed by the two coders. Out of 110 computed Kappa's, 16 fell below this criterion. Because of the nature of Cohen's Kappa and how it controls for chance probability, items that have a majority of one response are likely to fall below 0.8 with only one or two disagreements. Therefore, the five items that only had one disagreement but fell below the 0.8 cut off were determined not to be of concern. The coders met

and discussed the remaining 11 items. Disagreements were resolved in three ways: (1) it was determined to be a case of simple coder error and it was noted which coding response was correct; (2) it was identified that the skip pattern was unclear and caused the miscoding (e.g., one coder responded ‘Not Applicable’ while the other coder responded ‘No’ - this was seen as a skip pattern issue and not a disagreement among coders); or (3) it was a true disagreement and coders called upon the larger VU team to make final decisions. The VU team approved the suggested changes made by the coders and served as a final judge in any additional disagreements. A single coder used the final codebook to code the remaining recordings.

## Study Population

### *Differences Between This Sample and the Total Population*

In order to compare the call center sample to the total population, a random sample of 1,000 PDHRAs was chosen from the PDHRA database used for the secondary analysis described in other chapters within this report. Since the call sample included SMs only from Army Reserve, Army National Guard, and Navy Reserve, we restricted the random sample to these components, reducing the 1,000 SM random sample to a matched random sample of 245 SMs. Table 7.2 shows that the outcomes of interest; the mean represents the percentage of SMs endorsing the problem. Note that the number of subjects differs across subscales due to missing data. Outcomes were not significantly different between the overall PDHRA data and the call data. While the small sample used for this chapter appears to be equivalent on PDHRA outcomes to the larger sample used throughout this report, our sample should not be considered a representative sample.

**Table 7. 2. Comparing a random sample to our call sample linked to PDHRAs**

PDHRA Subscale (binary)	PDHRA (Random Sample) N = 245			Call Sample N = 146			Bootstrap p-value
	n	Mean	SD	n	Mean	SD	
Q1-8 General health history	245	71%	46%	144	85%	36%	0.02
Q8a Physical health concerns	245	46%	50%	144	58%	49%	0.16
Q10a Exposure concerns	245	38%	49%	144	44%	50%	0.93
Q9d TBI symptoms	181	24%	43%	125	38%	49%	0.06
Q12 PTSD symptoms	244	34%	48%	144	45%	50%	0.32
Q14 Depressive symptoms	235	14%	35%	132	17%	37%	1.00
Q13 Alcohol problems	240	40%	49%	139	45%	50%	0.96
Q15-18 Requests for support	245	29%	45%	144	33%	47%	0.98
Any SM self-reported problems	245	88%	32%	144	94%	24%	0.53
Clinician major concern: any	245	29%	45%	144	38%	49%	0.47
Q8 Any referral	245	43%	50%	144	50%	50%	0.89
Q11 SM declined referral	245	11%	32%	144	10%	30%	1.00

*Note: When the number of multiple tests are considered, none of these p values are statistically significant.*

### *Service Members*

Since the PDHRA was missing for nearly half of the larger sample, the only demographic information available for the entire sample of 272 SM were clinician and SM gender (coded by RIASWorks). Table 7.3 shows the gender concordance of these interviews. The table shows an

overwhelming majority of SMs were male. Both male and female SMs were similarly likely to get a male or female clinician.

**Table 7. 3. Gender concordance between clinicians and SMs for entire call sample (n=272)**

		SM % (n)	
		<i>Male</i>	<i>Female</i>
Clinician	<i>Male</i>	41.9% (114)	5.1% (14)
	<i>Female</i>	46.3% (126)	6.6% (18)

The demographic information for the smaller sample (n=146), coded by RIASWorks and linked to a PDHRA, is presented in tables 7.4 and 7.5. Percentages shown in tables 7.3 and 7.4 are similar, indicating that the gender concordance of the smaller call sample is very similar to that seen in the larger call sample. Table 7.5 presents SM demographic information taken from the PDHRAs of the smaller (n=146) sample. As expected, there were significantly more male than female SMs. Ages ranged from 20-59 years with a mean of 35.8 years old. Army Reserve and Army National Guard accounted for nearly 81% of the total sample. Furthermore, the majority of SMs had a pay grade ranging between E05-E06. Lastly, the date of departure from theater ranged from April 2003 to June 2008; the mean departure date was in March 2007.

**Table 7. 4. Gender concordance between clinicians and SMs for call sample linked to PDHRAs (n=146)**

		SM % (n)	
		<i>Male</i>	<i>Female</i>
Clinician	<i>Male</i>	41.8% (61)	4.8% (7)
	<i>Female</i>	46.6% (68)	6.8% (10)

**Table 7. 5. SM Demographic information for PDHRA-linked sample (n=146)**

	<b>n</b>	<b>%</b>
Male	129	88.4
Female	17	11.6
<b>Age</b>		
20-29	48	32.9
30-39	42	28.8
40-49	44	30.1
50-59	12	8.2
<b>Service Branch and component</b>		
Army Active	2	1.4
Army Reserve	69	47.3
Army National Guard	49	33.6
Navy Reserve	24	16.4
Marine Reserve	2	1.4
<b>Paygrade</b>		
E01 - E04	35	24.0
E05 - E06	61	41.8
E07 - E09	15	10.3
W01 - W05	4	2.7
O01 - O04	20	13.7
O05 - O10	11	7.5

## Analyses

There are two samples used for analyses; a large sample of coded calls (n=272) and the smaller sub-sample that is coded and linked to a January 2008 version of the DD Form 2900 (n=146).

Analyses were conducted for the two main aims. The first aim was to describe the content of interviews and determine how it relates to the PDHRA. For these analyses, we considered only the presence or absence of problems reported on the PDHRA (see Chapter 3 for a complete description of how these variables were calculated) using descriptive statistics and Fisher's 2-tailed tests.

The second aim was to describe the clinician's communication patterns and determine how it relates to outcomes. For this aim, descriptive statistics and hierarchical linear model (HLM) analyses were used. When comparing RIAS communication variables and PDHRA symptoms, rapport variables (see Table 7.1) were chosen for analysis because it was expected that greater use of rapport techniques would be related to more disclosure during the interview. In addition, the Vanderbilt Internal Coding System (VICS) variables were specifically designed to answer questions about content, not rapport. Therefore, rapport was uniquely available from the RIAS data set. Many of the rapport variables occurred very infrequently, so only six were used in analysis ('shows agreement, understanding', 'make personal remarks', 'laughs, tells jokes', 'expresses direct approval to SM', 'expresses worry, concern', and 'reassures, optimism'). Further, due to the large number of calls in which certain RIAS variables did not occur, a Poisson distribution was used for analyses (Long, 1997). PDHRA variables used in this section include the number of items (i.e., the count) endorsed by SMs in each problem area.

Because clinicians interviewed multiple SMs, SMs are nested within clinicians, making the data structure multilevel. HLMs are the appropriate models to use because they allow control for the nested nature of the data where SMs are clustered within clinicians (Bryk & Raudenbush, 1992; Goldberger, 1991). The models estimate variance components, including the percentage of total variance due to SM and clinician. According to Raudenbush and Liu (1992), intraclass correlation coefficients (ICCs) of 5%/10%/15% can be considered small/medium/large, analogous to Cohen's (1992) well-known effect size standards. In this study, ICCs helped unravel whether clinicians or SMs had more influence on communication patterns addressed during PDHRA interviews. It should be noted that duration of call was highly correlated with both RIAS communication variables and SM reported problems; therefore, it was not included in the HLMs because of this high correlation.

### ***Result - Section 1: Content of the Interview and how it Relates to PDHRA Outcomes***

#### **Physical Concerns are Mentioned More Often by the Clinician Than Mental Health Concerns**

Table 7.6 presents the topics mentioned by the clinician, the SM, or both, as measured by the Vanderbilt Internal Coding System (VICS), for the sample of calls that were linked to the PDHRA (n=146). Issues related to general health (Q1-2) and physical health (Q7-8) were mentioned in over 84% of calls (coders noted anecdotally that clinicians tended to use these two topics as an introduction to the interview process). The mental health topics (PTSD, depression, and relationship conflicts) were mentioned at a much lower frequency than physical concerns. PTSD was the mental health topic most often mentioned; while relationship conflict was the least mentioned (66.4% and 43.2% respectively).

**Table 7. 6. Topics Mentioned during interviews (n=146)**

VICS Subscale - Mentioned	Topic Mentioned	
	n	%
Q1-2 General health	123	84.2
Q3-4 Impairment	60	41.1
Q5-6 See Provider/Hospitalization	77	52.7
Q7-8 Physical health concerns*	143	97.9
Q10 Exposure concerns	96	65.8
Q9 TBI symptoms	29	21.9
Q12 PTSD symptoms	97	66.4
Q14 Depressive symptoms	70	50.0
Q11 Relationship conflict (single item)	63	43.2
Q13 Alcohol problems	103	71.9
Q15-18 Requests for support	23	15.8

*\*The VICS coding for this category includes mention of a wound, injury, assaulted or physically hurt during deployment (question 7 on the DD Form 2900).*

Note that the TBI and requests for support categories were mentioned the least. This may have been a function of the VICS. Physical symptoms that overlapped with TBI symptoms or talk of an explosion not explicitly linked to TBI were not coded as TBI discussion in the VICS. It was

only coded as such if the clinician or SM actually said ‘traumatic brain injury’ or ‘TBI’<sup>3</sup>. Further, self-referral was only coded as such if the clinician identified that he/she was referring to that section of the PDHRA.

### Behavioral Health Topics are Mentioned More Often When Endorsed on the PDHRA Self-report

Table 7.7 explores the interaction between positive endorsements on the SM self-report section of the PDHRA and whether the topic was mentioned during the interview. Notably, there was no relationship between mention of topics related to physical or exposure issues and those problems being self-reported on the PDHRA SM self-report. For example, in almost all interviews, clinicians brought up the topic of physical health regardless of whether the SM had indicated a problem in that area. However, clinicians were less likely to raise issues related to behavioral health, TBI, or a request for support unless the SM had already indicated that there was a problem in one of those areas on the PDHRA. Given the stigma associated with behavioral health and the emphasis in clinician training provided to these phone interviewers to address these issues, it would be expected that clinicians would raise them during the clinical interview even when the SM did not report them.

**Table 7. 7. Topics mentioned by PDHRA SM self-report subscale area (n=146)**

VICS Subscale - Mentioned	Did Not Endorse Problem		Endorsed Problem		Corresponding PDHRA SM Problem Subscale (Binary) <sup>2</sup>
	n	% had Topic Mentioned	n	% had Topic Mentioned	
Q1-2 General health	23	87.0	123	83.7	Q1-8 General health history
Q3-4 Impairment	23	39.1	123	41.5	
Q5-6 See Provider/Hospitalization	23	56.5	123	52.0	
Q7-8 Physical <sup>1</sup>	61	96.7	85	98.8	Q8a Physical health concerns
Q10 Exposures	82	61.0	64	71.9	Q10a Exposure concerns
Q9 TBI	78	11.5	49	40.8***	Q9d TBI symptoms
Q12 PTSD	80	50.0	66	86.4***	Q12 PTSD symptoms
Q14 Depression	112	47.3	22	77.3**	Q14 Depressive symptoms
Q11 Relationship conflict	95	36.8	49	57.1*	Q11 Relationship conflict (single item)
Q13 Alcohol	77	57.1	64	92.2***	Q13 Alcohol problems
Q15-18 Requests for support	97	8.2	49	30.6***	Q15-18 Requests for support

<sup>1</sup>The VICS coding for this category includes mention of a wound, injury, assaulted or physically hurt during deployment (question 7 on the DD Form 2900).

<sup>2</sup>Fisher's Exact Test (2-tailed). \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

<sup>3</sup> After review of the draft final report by FHP&R, it was noted that clinicians at the contracted agency had been advised to talk about “concussions” rather than “TBI” or “traumatic brain injury.” A review of the VICS coding database and associated PDHRA files revealed that the TBI portion of the risk assessment had a high rate of missing data, indicating that some clinicians had not documented whether further inquiry took place. However, further refinement of the VICS coding scheme could incorporate additional commonplace language for TBI with re-coding for future research.

## The Most Common Educational Information Offered is Related to the PDHRA Process and Healthcare Benefits

Table 7.8 represents the education variables obtained from the VICS. For each of the four broad concern areas found on the PDHRA (physical/TBI, exposures, mental health, and alcohol), VICS coded if the clinician: (1) mentioned that other people have similar concerns (considered a destigmatization effort); (2) provided facts or figures about this subscale area; and (3) offered resources, other than referral, to the SM (e.g., websites, pamphlets). The ‘any education’ column indicates if the any of these three categories were mentioned during the call. Note that the VICS subscales are broader than the previous table (7.7); this is due to our effort to obtain high inter-rater reliability. Coding whether a topic was mentioned proved much more accurate than differentiating a specific topic. For instance, if both depression and PTSD were being discussed, the clinician could say, “Sometimes it’s good to talk to people about these things”, making it difficult to know if that was in reference to one or both topics. In addition to the concerns assessed on the PDHRA, the VICS also counted the number of calls in which education was provided about military policies (e.g., clearance policies surrounding mental health issues), PDHRA process (e.g., when they will receive their paperwork in the mail), healthcare benefits (this is not talk about referral or Military OneSource, e.g., benefits were extended to 5 years), or general education that did not fit into any of these specific categories and was not in reference to a specific problem (e.g., the website site address for Battlemind II).

**Table 7. 8. Types of education offered during interviews (n = 146)**

VICS Data - Education	Any Education		Others Have This Concern		Facts/Figures About Area		Offered Resource	
	n	%	n	%	n	%	n	%
<b>Specific PDHRA concerns</b>								
Q7-9 Physical / TBI*	16	11.0	2	1.4	15	10.3	4	2.7
Q10 Exposures	3	2.1	2	1.4	1	0.7	0	0
Q11, 12 & 14 Mental health	20	13.7	9	6.2	17	11.6	7	4.8
Q13 Alcohol	13	8.9	2	1.4	10	6.8	8	5.5
<b>Other types of education</b>								
Military policies	3	2.1						
PDHRA process	92	63.0						
Healthcare benefits	66	45.2						
General education	6	4.1						

\*The VICS coding for this category includes mention of a wound, injury, assaulted, or physically hurt during deployment and TBI symptoms (question 7 & 9 on the DD Form 2900)

As seen in table 7.8 there was little education provided. Six of the eight variables are below 15%. The two exceptions were education about the PDHRA process and health care benefits (63% and 45.2% respectively). PDHRA process education usually reflected a simple comment at the end of the call to indicate that the SM would receive a copy of the PDHRA in the mail, although on rare occasions it was more elaborate (usually prompted by the SM asking why he/she needed to complete the PDHRA process). Within the specific PDHRA concern subscales, clinicians gave education for mental health and physical/TBI concerns most often (13.7% and 11.0% respectively). In one of these calls, the SM asked the clinician if seeking treatment for TBI would put a ‘red flag’ in his file for promotion. The clinician gave him appropriate information about

military policies and the SM subsequently accepted the referral, suggesting that topic-specific education may have an impact on referral acceptance. Further, destigmatization efforts (expressing that others have this concern as well) were most likely to occur when discussing mental health issues. In very few calls (3), discussion occurred relevant to education about exposure concerns or military policies.

### **Behavioral Health Education is Given More Often When SMs Endorsed Problems on the PDHRA Self-report**

Table 7.9 explores the interaction between positive endorsements on the SM self-report section of the PDHRA and education given relevant to each subscale. When general health history, physical health concerns, or exposure concerns were reported on the PDHRA, clinicians were no more likely to give education about these topics than if they had not reported a problem. However, clinicians were much more likely to give mental health-related education to SMs who reported problems with alcohol, mental health issues, or TBI on the PDHRA compared to SMs who had not reported a problem in these areas. This is an encouraging finding given the stigma typically related to mental health and alcohol issues. However, as seen in Table 7.8, rates of providing any education in these areas is very low regardless of whether or not the SM had already reported a problem on the PDHRA.

**Table 7. 9. Education topics by PDHRA SM self-report subscale area (n = 146)**

VICS Subscale - Education	Did not endorse problem		Endorsed Problem		Corresponding PDHRA SM Problem Subscale (Binary) <sup>2</sup>
	n	% had Education Given	n	% had Education Given	
Q7-9 Physical / TBI <sup>1</sup>	23	4.3	123	12.2	Q1-8 General health history
	61	8.2	85	12.9	Q8a Physical health concerns
	78	6.4	49	20.4*	Q9d TBI symptoms
Q10 Exposures	82	0.0	64	4.7	Q10a Exposure concerns
Q11, 12 & 14 Mental health	80	2.5	66	27.3***	Q12 PTSD symptoms
	112	8.0	22	45.5***	Q14 Depressive symptoms
	95	7.4	49	26.5**	Q11 Relationship conflict (single item)
Q13 Alcohol	77	1.3	49	18.8***	Q13 Alcohol problems

<sup>1</sup>The VICS coding for this category includes mention of a wound, injury, assaulted, or physically hurt during deployment and TBI symptoms (question 7 & 9 on the DD Form 2900).

<sup>2</sup>Fisher's Exact Test (2-tailed). \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

### **Critically Important Behavioral Risk Assessment Questions Were Not Asked in Every Interview but Clinicians Recorded That They Did Ask on the DD Form 2900**

There are two behavioral risk questions on the PDHRA: (2a) “Over the past month have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way? If yes, about how often have you been bothered by these thoughts?” and (2b) “Since return from your deployment, have you had thoughts or concerns that you might hurt or lose control with someone?” Table 7.10 shows the VICS data for this portion of the PDHRA. This table indicates whether or not the behavioral risk questions were asked, if the correct time period for the two questions were indicated properly (e.g., ‘in the past month’ versus ‘have you ever’), and whether

the behavioral risk questions were asked as distinct separate questions (instead of ‘have you thought about harming yourself or others’).

Most of the SMs were asked both of the behavioral risk questions; however four SMs were not asked either question. An additional SM was not asked about losing control with others. Out of these five calls, two accepted a referral, two were not offered a referral, and one declined a referral despite sleeping problems and numerous endorsements on the PDHRA. Furthermore, it should be noted that despite the fact that clinicians did not ask these questions during the interview, all of the PDHRAs indicated that the SM had reported ‘no’ to these questions. In very few cases the clinicians are incorrectly recording risk assessment answers without actually asking the questions during the interview.

Additionally, some clinicians were not asking the questions verbatim and time periods were often neglected or different than the ones indicated of the DD Form 2900. Although this only happened 13% of the time when asking the question about self harm, this happened more than half of the time when asking about losing control with others. Furthermore, in nearly 20% of calls the behavioral risk assessment questions were not asked as two distinct questions. It is unlikely for a SM to endorse both harming him/herself and others. Therefore, it is important for the clinician to ask each question distinctly as to assure appropriate responses to each question.

**Table 7. 10. Behavioral risk assessment during interviews (n = 146)**

VICS Data	Asked / Mentioned		Time					
			Correct		None Indicated		Incorrect	
	n	%	n	%	n	%	n	%
Q2a SM harm self (past month)	142	97.3	127	87.0	11	7.5	4	2.7
Q2b SM harm other (since deployment)	141	96.6	62	42.5	54	37.0	25	17.1
Q2a & Q2b Asked as separate/distinct questions	119	81.5						

### **Clinicians Do Not Consistently Document the Behavioral Risk Assessment Response**

Table 7.11 shows the PDHRA reported positive responses to either of the behavioral risk assessment questions (harm to self and losing control with others; Q2a & 2b), as well as two questions on the VICS designed to assess SM response and clinician follow-up questions. Eleven SMs were recorded on the PDHRA as having responded ‘Yes’ or ‘Unsure’ to the behavioral risk assessment questions. However, six additional calls (17 total) were identified by the VICS as having a potentially positive response to the risk assessment questions. For example, in one interview when asked if he had thoughts about hurting himself the SM stated “Um...[3 second pause] I’m not sure how to answer that one...[2 second pause] I haven’t been happy – no...[2 second pause] I mean some days I’m fine and some days I’m not...[1 second pause] pretty big swings,” but the DD Form 2900 was marked with a ‘No’ answer.

In all of the calls that were positive for behavioral risk (either by the VICS coding or as documented on the PDHRA), the clinician asked follow-up questions. This may explain those six cases where the VICS coding indicated a positive response but the PDHRA did not. This indicates that further training for clinicians on documenting behavioral risk may be warranted. VU understands that questions 2a and 2b are intended to document the SM’s response, while

question 3 is intended to document the clinician’s judgment. It should be noted that additional information may be recorded by the clinician in several text fields, but these were not provided to VU for analysis.

**Table 7. 11. Recorded positive behavioral risk responses according to PDHRA and VIC (n=146)**

	Q2a or 2b Behavioral Risk Assessment	
	n	%
PDHRA response (yes/unsure)	11	7.5
VIC coding (anything other than 'no')	17	11.6
VIC coding (follow-up elaboration question)	17	11.6

### **Clinicians Identified the Alcohol Scale as Being Too Sensitive**

VICS coders noted that clinicians’ interview styles for alcohol were different when compared to the other topics. Coders noted anecdotally that clinicians indicated through tone and statements that the alcohol portion of the PDHRA was too sensitive and thus not to be taken as seriously as the other sections of the PDHRA. For example, clinicians often gave the SM an alternative response when they asked a question about alcohol use (e.g., “So do you have an alcohol problem or is this just social drinking?”). Although multiple attempts were made, it was impossible to code this subtlety with an acceptable level of inter-rater reliability. However, there were five specific calls where the clinician verbally gave indication that they felt the alcohol scoring system was too sensitive. Below are the actual quotes from these five calls.

- “The military has a scoring system – a very harsh scoring system for how much they feel people should drink.”
- “So on the alcohol issue I do have to, you know, just give you a little warning that you are just on the border of where we have to mention to you that it is an issue or we have to mention about resources, if you would like some. You are seeing someone right now [for mental health issues]. You know they feel that it is just on the border. They have a scale of 4 or higher and you are just at the 4. Okay, if you want resources or maybe you can try to think about cutting back yourself. Do you feel it is an issue or problem?” SM, explains that drinking is part of the [state name] culture. Clinician replies, “It is a pretty strict guideline too.”
- “You scored a 4, they want you technically less than 4. Umm, but it is a pretty narrow range. So just something for you to be aware of.” The SM asks what a 4 means and the clinician explains the scoring system and what each of his PDHRA responses was worth. Then the clinician says, “It is a narrow range. If you have a glass of wine with dinner even part of the week you would be over their point system. It is to catch people who have serious issues.”
- Clinician: “Believe it or not you are going to get nicked on the [alcohol] scoring system here. Ahh, even though you only drink 2 – 4 times a month, 5 – 6 at a time. You are going to come out to having an AUDIT-C score of 6—which means that I actually should offer referral and assessment for an alcohol related problem. Do you think you are having, you know, any major issues with alcohol at all?” SM replies “No, not at all.”

Clinician responds, “It doesn’t take much. I guess my only advice would be to make sure you don’t binge too much or increase your frequency or anything like that.”

- “Basically if you *look* at alcohol you get flagged for the little questionnaire [PDHRA]. So even at two a couple of times a month, if you are drinking 3 – 4 drinks at a time, [or] you go over six less than monthly you still score 4 points. Which – uh - you know - tells me that I should - I have to at least ask the question — Do you have any difficulty with alcohol, you think? As far as drunk driving or going to work drunk or anything like that?” SM replies, “No.” Clinician adds, “So, I am assuming you don’t think you need to be referred for alcohol related issues or anything like that?”

Although the alcohol scoring guideline was created to help clinicians inquire about potential problems, the low threshold may be causing clinicians to become desensitized to alcohol problems. Additionally, it is possible that these comments may be examples of the clinicians’ efforts to build rapport with the SM. For example, in the fourth example above, it is clear that although the clinician identified the guidelines as being too strict, he did advise the SM to avoid bingeing.

### **Mental Health Education is Given More Often When a PDHRA Referral is Made**

Table 7.12 explores the interaction between mental health education and referrals. Recall from a previous section that only 13.7% of SMs received mental health education. This education involves the three categories discussed earlier in the chapter: (1) mention that other people have similar mental health concerns; (2) provision of facts or figures about the mental health issue; and/or (3) offering resources, other than referral, to the SM (e.g., websites, pamphlets). Table 7.12 shows that receiving a referral was significantly associated with receiving mental health education, with the exception of referrals to specialty physical care and SMs’ declining referral. However, these results should be interpreted with caution since there were extremely small numbers in these conditions. Only one SM in the sample received a specialty physical care referral (and did not receive mental health education) and only 14 declined a referral. Taken together, the results in Table 7.12 suggest that mental health education may increase the likelihood of accepting a referral. Note that these referrals could be for any reason and are not specific to SM self-reported mental health problems.

**Table 7. 12. Education topics by PDHRA referral types (n = 146)**

VICS Subscale – Education	Did Not Receive Referral		Received Referral		PDHRA Referral Types*
	N Not Receiving a Referral	% had Education Given	N Receiving a Referral	% had Education Given	
Q11, 12 & 14 Mental health	74	5.4	72	22.2**	Q8 Any referral
	96	8.3	50	24.0*	Q8 Any medical referral
	101	7.9	45	26.7**	Q8 Primary Care
	133	11.3	13	38.5*	Q8 Behavioral care
	122	10.7	24	29.2*	Q8 Military OneSource
	141	12.1	5	60.0*	Q8 Other non-medical referral
	132	14.4	14	7.1	Q11 SM declined referral

\*Fisher's Exact Test (2-tailed). \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

### **Treatment is Discussed More Often When the SMs Endorse a Problem on the PDHRA**

Table 7.13 presents treatment discussion as a function of problem areas endorsed on the PDHRA self-report. As coded by the VICS, treatment discussion included any discussion of treatment, whether the clinician asked about previous treatment or the SM spontaneously self-disclosed that they had or had not already sought treatment. It does not identify whether the SM was already in treatment. Additionally, it should be noted that the VICS combined treatment talk about physical health concerns and TBI symptoms.

Table 7.13 shows that for almost all PDHRA subscales, the discussion of related treatment occurred more often when the SM had endorsed a problem than when they did not; the exception was for alcohol use issues. However, there was substantial variability in discussing the occurrence of previous treatment depending on the type of problem. For SMs endorsing specific problems on the PDHRA, the percentage of cases where related treatment was discussed was highest for physical health issues, lowest for alcohol and exposure issues, and occurred in about half of cases when mental health issues were mentioned. Given that discussion of previous care is important to determining the need for referral for further evaluation, it is not clear why such discussion would differ depending on the type of problem endorsed by the SM.

**Table 7. 13. Percentage of calls in which previous treatment was discussed for each PDHRA problem area (n = 146)**

VICS Subscale	Did Not Endorse Problem		Endorsed Problem		Corresponding PDHRA SM Problem Subscale (Binary) <sup>2</sup>
	n	% Discussed Treatment	n	% Discussed Treatment	
Q7-9 Physical / TBI <sup>1</sup>	23	26.1	123	87.0***	Q1-8 General health history
	61	57.4	85	91.8***	Q8a Physical health concerns
	78	70.5	49	87.8*	Q9d TBI symptoms
Q10 Exposures	82	6.1	64	25.0**	Q10a Exposure concerns
Q11, 12 & 14 Mental health	80	11.3	66	50.0***	Q12 PTSD symptoms
	112	25.0	22	63.6*	Q14 Depressive symptoms
	95	14.7	49	55.1***	Q11 Relationship conflict (single item)
Q13 Alcohol	77	1.3	64	3.1	Q13 Alcohol problems

<sup>1</sup>The VICS coding for this category includes mention of a wound, injury, assaulted, or physically hurt during deployment and TBI symptoms (question 7 & 9 on the DD Form 2900).

<sup>2</sup>Fisher's Exact Test (2-tailed). \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

## **Results—Section 2: Clinicians' Communication Patterns and How They Relate to PDHRA Outcomes**

### **Clinician Communication Patterns Vary Greatly**

Table 7.14 presents the RIAS clinician communication variables for the entire population of calls (n=272). Full descriptions and examples for each variable can be found in Table 7.1. They are in descending order by number of calls in which the variables occurred. Notably, 'clinician shows agreement, understanding' (e.g., "Oh, I see."), and 'clinician paraphrases, checks for understanding' (e.g., "You report no TBI") occurred in every call. In contrast, 'clinician makes empathy statements' (e.g., "This is distressing for you, I understand") and 'clinician expresses general disagreement, criticism' (e.g., "I just don't like the way things are run up there.") occurred in only nine (3.3 %) calls. Furthermore, the majority of RIAS variables, 18 of 35, occurred in less than 50% of calls. This illustrates that there was a great degree of variation in the types of communication clinicians used.

The descriptive statistics in Table 7.14 account only for the calls in which the variable of interest occurred (the n column identifies the number of calls that had at least one occurrence of the communication variable). For instance, the mean of 'clinician self discloses' is 0.47 when you use all 272 calls. However, Table 7.14 reports the mean as 3.97 because it only averaged the 32 calls where the clinician self disclosed and does not include the 240 calls where self disclosure did not occur.

Communication variables vary not only in whether or not they were expressed, but also how often they were expressed when they did occur. 'Gives life style information' had the largest range occurring anywhere from one to 117 times during a single call. Although Table 7.14 reports only on calls where the utterance of interest happened, there is still substantial variability

in the frequency of occurrence. For instance, ‘clinician self discloses’ occurs on average four times per call, but the median frequency is 1.5 times per call with a range of 49.

**Table 7. 14. Descriptive statistics for RIAS variables**

<b>Clinician</b>	<b>Category</b>	<b>n</b>	<b>% ≥ 1</b>	<b>Mean<sup>2</sup></b>	<b>SD<sup>2</sup></b>	<b>Median<sup>2</sup></b>	<b>Min<sup>2</sup></b>	<b>Max<sup>2</sup></b>
shows agreement, understanding	Rapport building	272	100	18.35	10.82	16	1	69
paraphrases, checks for understanding	Asks Questions	272	100	16.18	9.72	14	2	60
gives orientation, instructions	Gives Information	271	99.6	6.07	3.54	5	1	23
makes personal remarks	Rapport building	271	99.6	5.42	5.18	5	2	87
asks any psychosocial question <sup>1</sup>	Asks Questions	271	99.6	4.34	3.11	4	1	25
asks any lifestyle question <sup>1</sup>	Asks Questions	258	94.9	4.48	2.78	4	1	17
expresses direct approval to SM	Rapport building	258	94.9	3.74	2.94	3	1	21
uses transitions		253	93	6.11	4.66	5	1	26
asks any medical question <sup>1</sup>	Asks Questions	246	90.4	3.99	3.13	3	1	23
reassures, optimism	Rapport building	238	87.5	4.56	4.08	3	1	22
back-channels	Asks Questions	234	86	8.78	10.31	5	1	64
gives life style information	Gives Information	224	82.4	8.51	12.23	4	1	117
asks for opinion	Asks Questions	194	71.3	2.08	1.49	2	1	9
gives therapeutic regimen information	Gives Information	185	68	5.10	4.94	4	1	30
counsels life style / psychosocial	Gives Information	175	64.3	11.61	11.41	7	1	53
asks for understanding	Asks Questions	174	64	3.30	2.97	2	1	15
expresses concern, worry	Rapport building	151	55.5	2.74	3.21	2	1	31
laughs, tells jokes	Rapport building	122	44.9	3.39	4.48	2	1	31
counsels medical / therapeutic regimen	Gives Information	118	43.4	5.23	5.11	3	1	24
gives psychosocial information	Gives Information	112	41.2	3.16	2.93	2	1	14
gives medical information	Gives Information	100	36.8	3.71	4.01	2	1	23
asks any therapeutic regimen question <sup>1</sup>	Asks Questions	67	24.6	1.63	0.97	1	1	4
asks any other question <sup>1</sup>	Asks Questions	50	18.4	1.40	1.01	1	1	5
makes partnership statements	Rapport building	47	17.3	1.60	0.88	1	1	4

Clinician	Category	n	% ≥ 1	Mean <sup>2</sup>	SD <sup>2</sup>	Median <sup>2</sup>	Min <sup>2</sup>	Max <sup>2</sup>
bids for repetition		34	12.5	1.29	0.63	1	1	3
self-discloses	Rapport building	32	11.8	3.97	8.84	1.5	1	50
asks for permission		32	11.8	1.09	0.30	1	1	2
makes general compliment	Rapport building	31	11.4	1.26	0.63	1	1	4
makes unintelligible utterance		29	10.7	1.34	0.86	1	1	5
gives other information	Gives Information	28	10.3	1.64	0.95	1	1	4
expresses direct disagreement to SM		23	8.5	1.17	0.49	1	1	3
asks for reassurance		21	7.7	1.29	0.56	1	1	3
makes legitimating statements	Rapport building	15	5.5	1.40	0.91	1	1	4
makes empathy statements	Rapport building	9	3.3	1.33	1.00	1	1	4
expresses general criticism		9	3.3	1.33	1.00	1	1	4

<sup>1</sup> These are composite scores of raw RIAS data; Open-ended questions and close-ended questions for this category were combined into an 'any' variable (e.g., 'Asked open ended psychosocial questions' + 'Asked close ended psychosocial questions' = 'asks any psychosocial questions')

<sup>2</sup> Descriptive statistics only taken into account the calls that had at the variable occur at least once during the call.

### Occurrence of 'Rapport Building' Variables Fluctuates Greatly

As shown in Table 7.14, some rapport building variables occurred consistently (e.g., 'shows agreement, understanding') while others occurred rarely (e.g., 'makes legitimization statements'). 'Clinician shows agreement, understanding' and 'clinician makes personal remarks' (e.g., "Enjoy the rest of your day") happened on average 18.35 and 5.42 times per call, respectively; clinicians expressed these types of rapport building techniques universally and often. 'Clinician expresses concern, worry' (e.g., "I'm concerned with your dizzy spells") and 'clinician laughs, tells jokes' appeared to happen in nearly half of the calls and with less frequency per call than the most common rapport building variables. Nearly half of the rapport variables occurred in less than 18% of calls. 'Clinician makes partnership statements' (e.g. "I could give you the phone number [to Military OneSource] if you feel that would be helpful to you", 'self discloses' (e.g., "I'm a Reservist"), 'makes general compliments' (e.g. "The VA does excellent work"), 'makes legitimization statements' (e.g., "Who wouldn't have been affected by that experience?"), and 'makes empathy statements' (e.g., "That would be depressing") all occurred infrequently. These infrequently occurring variables may only be appropriate in certain circumstances. For instance, it would be unexpected or inappropriate for clinicians to make empathy statements in calls where no problem was indicated.

It was hypothesized that rapport variables would be related to SM self-disclosure (e.g., legitimization statements such as "A lot of SMs come back feeling on guard" might destigmatize certain behavioral health issues). However, nearly half of the rapport variables of interest (5 out of 11; 'making partnership statements', 'self discloses', 'makes general compliment', 'makes legitimizing statement', and 'makes empathy statements') were observed with such a low frequency, that no analyses using these variables could be conducted. The five rapport variables that had enough variance are explored below with HLM.

### **Clinicians Show Less Variation in ‘Asking Questions’ and ‘Giving Information’**

Both the ‘asking questions’ and ‘giving information’ variables occurred more consistently. Seven out of nine ‘asking questions’ variables occurred in more than half the calls. ‘Clinician paraphrases, checks for understanding’ occurred in all calls, averaged 16.2 times per call. This indicates that clinicians are using the DD 2900 to paraphrase responses and verify that they are still accurate.

When differentiating between the types of questions asked and the information given, RIAS distinguishes five ‘task oriented’ classifications: medical, therapeutic regimen, life style, psychosocial and other (see Table 7.1). All categories except ‘other’ are discussed here. The ‘asking questions’ variables occur in most of calls (over 90%), with the exception of therapeutic regimen (occurs in 24.5% of calls). This indicates that a variety of questions are usually asked, including medical, psychosocial, and life style questions.

The majority of ‘giving information’ variables are located in the middle of Table 7.14, indicating that they occur frequently, but not in every call. ‘Clinician gives orientation, instructions’ occurs in nearly every call and averages about six times per call. One of the RIAS coding experts indicated this code most likely represented that the clinician was orienting the SM to what was happening on the computer (e.g., “I’m bring up your DD Form 2900 now”, “I’m trying to locate a VA for you, but the web site is down”). The other ‘gives information’ variables (except ‘other’) occurred in about half of the calls. Clinicians gave lifestyle information the most, and gave medical information in the fewest number of calls.

### **SM Comorbidity, Medical and Behavioral Referral are Correlated with Clinician’s Agreement/Understanding**

Table 7.15 shows the correlations between the number of items endorsed by SMs in each problem area and the six chosen RIAS rapport variables; there was a small to medium correlation for all items. SM comorbidity (measured by total number of symptoms SMs reported in the PDHRA, labeled as ‘Overall PDHRA’) was positively correlated with clinicians showing direct approval to the SM, showing concerns and worry, reassuring, and showing agreement and understanding (correlations ranged from .21 to .36 ( $p < 0.01$ )). Regardless of the type of problem reported, clinicians showed more agreement and understanding to SM’s reporting higher comorbidity or more symptoms. The exception is for alcohol problems, which did not show this relationship.

Each of the SM-reported problem areas was significantly positively correlated with at least one RIAS communication variable, except for alcohol. The results indicate that SM endorsement of alcohol symptoms on the PDHRA does not influence the communication patterns clinicians use during the subsequent interview. These findings reinforce that alcohol use is treated differently than other problems during the interviews.

**Table 7. 15. Pearson correlations between RIAS rapport variables and SM reported problems and documented referrals on PDHRA (n=146)**

PDHRA	RIAS Clinician Communication Variables					
	Shows Agreement/ Understanding	Makes Personal Remarks	Laughs, Tells Jokes	Expresses Direct Approval to SM	Expresses Concern, Worry	Reassures Optimism
<b>SM problem subscale (totals/counts)</b>						
Q1-8 General health history (n=146)	0.28**	0.00	0.04	0.19	0.09	0.20
Q8a Physical health concerns (n=146)	0.25*	-0.07	0.04	0.19	0.11	0.13
Q10a Exposure concerns (n=146)	0.23*	0.07	0.20	0.14	0.22*	0.21
Q9d TBI symptoms (n=127)	0.23*	-0.02	0.08	0.24*	0.11	0.11
Q12 PTSD symptoms (n=146)	0.29**	0.07	0.13	0.28**	0.14	0.18
Q14 Depressive symptoms (n=134)	0.29**	-0.03	-0.05	0.21	0.03	0.18
Q13 Alcohol problems (n=141)	0.01	0.06	-0.04	-0.09	-0.01	0.01
Q11 Relationship conflict (single item, n=144)	0.25*	0.06	0.00	0.15	0.03	0.03
Q15-18 Requests for support (n=146)	0.23*	-0.07	-0.01	0.05	0.06	0.18
Overall PDHRA (n=146)	0.36***	0.03	0.15	0.21*	0.21*	0.21*
<b>PDHRA referrals</b>						
Q8 Number of referrals	0.28**	-0.05	-0.08	-0.13	0.08	0.06
Q8 Any medical referral	0.35***	-0.10	-0.06	-0.11	0.11	0.14
Q8 Primary care	0.31***	-0.05	-0.03	-0.10	0.11	0.14
Q8 Behavioral care	0.21	-0.05	-0.05	-0.01	0.06	0.12
Q8 Specialty physical care	0.11	-0.06	-0.04	-0.02	0.06	0.09
Q8 Military OneSource	0.10	0.01	-0.02	-0.11	-0.02	-0.05
Q8 Other non-medical referral	0.01	-0.03	-0.04	0.11	0.15	0.06
Q8 Any referral	0.34***	-0.10	-0.08	-0.13	0.09	0.08
Q11 SM declined referral	0.05	0.00	-0.07	-0.15	-0.09	-0.16

Note: When the number of multiple tests are considered *p* values of  $\leq 0.01$  should be considered significant (\* =  $<0.01$ , \*\* =  $<0.001$ , \*\*\* =  $<0.0001$ ).

The only RIAS communication variable significantly correlated with the type of referrals given was the clinician showing more agreement and understanding. The clinician showing agreement or understanding was significantly correlated with the number of referrals, whether any referral was made, whether a medical referral was given, and whether a primary care referral was given.

### **Variability in Clinicians' Communication Patterns Mostly Related to SM Characteristics**

Table 7.16 shows the intra class correlations (ICC) for the 34 clinicians and 146 SMs; all ICCs were statistically significant. Moreover, several were consistent with large effect sizes (15% or above). Most of the variance of each communication pattern came from differences across SMs within clinicians (SM ICC's ranged from 1 to 94%). The range in the variance explained by differences across clinicians was similar, although much lower (clinician ICCs ranged from 0 to

46%). Thus, most of the differences in clinician communication patterns were accounted for by the characteristics of the SMs being interviewed. For example, a clinician expressing concern or worry was solely based on SM characteristics and was not related to the clinician (given the 0% ICC). In contrast, clinicians' personal remarks were mostly associated with characteristics of the clinicians and not the SM. This suggests that communication patterns vary mostly based on who is being interviewed, less often on a 'clinical style.'

Personal remarks showed the highest ICCs among clinicians, suggesting that personal remarks might be more reflective of a clinician's trait or style rather than in response to individual SMs. In the other communication patterns, clinicians seemed to adjust to SM differences by tailoring their communication patterns to SM-reported symptoms.

**Table 7. 16. Intra class correlations of clinicians and SMs using unconditional models (n=146)**

<b>RIAS Clinician Communication Variables</b>	<b>Clinician ICC</b>	<b>Residual ICC</b>
Shows agreement, understanding	19%	81%
Makes personal remarks	46%	54%
Laughs, tells jokes	0%	100%
Show direct approval to the SM	9%	91%
Expresses concern, worry	0%	100%
Reassures, optimism	22%	78%

*Note: All ICCs are statistically significant  $p < 0.001$*

### **Endorsement of Alcohol Symptoms Does Not Seem to Relate to Clinicians' Communication Patterns**

Table 7.17 shows the results from HLM models that examined how each type of SM problem was associated with each of the six communication patterns. The dependent variable of each model was the communication pattern and the independent variable was the SM problem type (with no other covariate or predictor included). These models confirmed many of the previous correlations while controlling for the nesting of SMs within clinicians.

There was a similar pattern with the HLM models as there was with the correlations. According to these models, regardless of type of problem, the higher the number of problem areas reported by the SM, the more the clinicians showed agreement and understanding, with the exception of alcohol problems. In fact, many of the SM concerns were associated with more than one communication variable. Again, this suggests there is a different communication pattern when alcohol problems are reported.

SMs' comorbidity, measured by the total number of symptoms endorsed, show that when SMs reported more symptoms of any kind, clinicians show more agreement, approval, concerns and reassurance/optimism (regardless of type of problem).

**Table 7. 17. HLM results for SM reported problems on PDHRA predicting clinician communication patterns (n = 146)**

PDHRA SM Problem Subscales (Totals/Counts)	RIAS Clinician Communication Variables					
	Shows Agreement, Understanding	Makes Personal Remarks	Laughs, Tells Jokes	Expresses Direct Approval to SM	Expresses Concern, Worry	Reassures, Optimism
Q1-8 General health history	More***	---	---	More*	---	More**
Q8a Physical health concerns	More**	---	---	---	---	---
Q10a Exposure concerns	More**	---	More*	---	More*	More**
Q9d TBI symptoms	More*	---	---	More**	---	---
Q12 PTSD symptoms	More***	More*	---	More**	---	More**
Q14 Depressive symptoms	More***	---	---	More*	---	More**
Q13 Alcohol problems	---	---	---	---	---	---
Q11 Relationship conflict (single item)	More**	---	---	---	---	---
Q15-18 Requests for support	More**	---	---	---	---	More**
Overall PDHRA (n=146)	More***	---	---	More**	More*	More***

*Note: When the number of multiple tests are considered p values of  $\leq 0.01$  should be considered significant (\* =  $<0.01$ , \*\* =  $<0.001$ , \*\*\* =  $<0.0001$ ).*

### **SM Comorbidity and Clinicians' Agreement Increases the Likelihood of Medical Referral**

Table 7.18 shows the odds ratios for the impact of six separate communication patterns on the likelihood of receiving medical referrals, after accounting for SM comorbidity and the nesting of SMs within clinicians. It should be noted that the likelihood of medical referrals increased with SM comorbidity (the number of SM problems endorsed), with referrals 1.4 times more likely for each additional symptom area reported. As can be seen in the table below, the only communication pattern associated with increased likelihood of referral was showing agreement or understanding. This is consistent with the information presented earlier in Table 7.15, which showed significant correlations between the clinician showing agreement or understanding and referrals.

In contrast, when the clinician showed more direct approval towards the SMs (e.g., complimenting the SM), they were significantly less likely to receive a medical referral. Note that in Table 7.15, the correlation between the clinician expressing direct approval to the SM and medical referral was not significant, although it was in the expected direction (negative). Further, this communication pattern was significantly correlated with several SM problem subscales, including TBI symptoms, PTSD symptoms, and the overall PDHRA subscale (total number of SM problem areas) - indicating the more direct approval was associated with higher likelihood of one or more problems self-reported by the SM in each of these areas. While these results seem contradictory, they are not because the analysis for odds ratios adjusted for the influence of SM comorbidity (the overall PDHRA subscale) and nesting of SMs within clinicians. The simple correlations presented in Table 7.15 did not make any such adjustments.

**Table 7. 18. Odds ratio for predicting medical referral from clinician communication patterns (n = 146)**

Provider	Odds Ratio
Shows agreement, understanding	1.10*
Makes personal remarks	0.78
Laughs, tells jokes	0.90
Expresses direct approval to SM	0.77*
Shows concern, worry	1.06
Reassures, optimism	1.07

*Note: When the number of multiple tests are considered p values  $\leq 0.01$  should be considered significant (\* =  $<0.01$ ). Using a logistic model controlling for SM comorbidity and nesting of the data (Proc GenMod with repeated measures and binomial distribution).*

## Conclusions

As stated previously, the four goals of the clinical interview portion of the PDHRA are: (1) to clarify and confirm responses on the DD Form 2900, (2) to educate SMs about concerns, healthcare, and treatment options, (3) to conduct a risk assessment, and (4) to make referrals for further evaluation where warranted.

General health and physical health issues, unlike mental health issues, were mentioned during the interview (by the clinician and/or the SM) in nearly all of the coded interviews. However, TBI, mental health (PTSD, depression, and relationship conflicts) and alcohol problems were more likely to be mentioned in those interviews where the SM had previously self-reported those problems on the PDHRA. These findings are relevant to the first goal of the PDHRA, which is to clarify and confirm SM responses on the DD Form 2900. It appears that clinicians are creating opportunities for discussion of general and physical health issues no matter what the SM previously reports; this offers the opportunity to not only confirm the continued existence of problems, but also report the occurrence of new, unreported problems. In other words, in these cases the clinical interview may be contributing both to the sensitivity (identifying a problem where one exists) and specificity (identifying the lack of a problem where one does not exist) of the PDHRA process as a whole. In contrast, the clinician does not offer such general opportunities for mental health, TBI, and alcohol issues; SMs are less often provided a window to report the occurrence of problems in these areas that were not already reported. For TBI, mental health, and alcohol issues, the clinical interview may be contributing more to the specificity than the sensitivity of the PDHRA process. While of course an SM can bring up any issues of interest desired during the interview, it is notable that clinician behavior differs by the type of problem. Given the stigma associated with mental health and alcohol problems, clinicians could potentially be more effective in increasing rates of SM reporting in these areas by raising these topics with all SMs regardless of self-report on the DD Form 2900.

Regarding the second goal, education about concerns, healthcare and treatment options occurred very seldom. The most frequent forms of educational statements made by clinicians were about the PDHRA process itself, and to a lesser extent, healthcare benefits. Of particular note, clinicians' attempts to destigmatize mental health issues by mentioning that others have those concerns or providing facts and figures about relevant issues rarely occurred (6.2% and 11.6% of

calls respectively). However, in the few calls in which mental health education did occur, it was strongly positively associated with both SM-reported problems and referrals. Each and every healthcare encounter offers an opportunity to raise awareness of health risks and normalize responses in at-risk populations. From the findings presented in this chapter, it does not appear that these general education goals are consistent with observed discussion within the PDHRA interview.

A third purpose of the PDHRA clinical interview is to conduct a risk assessment including behavioral risk (harm to self or others), alcohol use problems, and TBI concerns. The analyses presented herein focused on the first two<sup>4</sup>. About 97% of the clinical interviews were coded as specifically including the two questions related to behavioral risk; although in almost 20% of cases they were not asked as separate questions. Further, while the majority of calls had the time window correct (“within the past month”, 87%) for the self-harm question, less than half of the time (42.5%) did clinicians appropriately indicate the time period “since deployment” for the question about SM harm to others. Further, there were a very few cases where the clinician did not ask one or both questions at all, or the documentation on the PDHRA was inconsistent with the SMs responses as coded by the VU team. Together, these findings suggest that additional clinician training, monitoring and feedback on the purpose and documentation of the behavioral risk assessment may be useful. Further, our findings indicate that clinicians may feel the algorithm for determining alcohol use problems is too sensitive. It is not clear if this is a training issue or a problem with the form.

The fourth goal of the PDHRA interview is to make referrals where further evaluation is warranted. This is a complex issue, and is multiply determined by the SM self-reported problems, the clinician’s findings from the interview itself, and the SM’s acceptance of any suggested referrals. For this chapter, the coding focused on two relevant issues: the occurrence of mental health education and whether or not previous care was discussed in the presence of SM self-reported problems. Mental health education was more likely to be discussed during the interview with SMs who received any type of referral, most often for behavioral care (38.5%) or other non-medical referrals (60.0%). In the few cases where an SM declined a referral, the rate of mental health education was low (7.1%). These results are by no means conclusive, but suggest that offering education together with a referral may contribute to referral acceptance.

Whether a SM is already in treatment for a reported problem likely influences if a referral is made (e.g., if a SM is not receiving care or is not satisfied with care, a referral may be warranted). The results presented here indicate that clinicians usually ask about previous treatment for physical health, general health, or TBI symptoms (87% to 92%), but are much less likely to do so for mental health problems (40 to 64%). SMs are usually not asked about previous treatment for exposure concerns (25%) and almost not at all for alcohol use problems (3%). There is not enough information to determine why these differences exist; perhaps clinicians are more likely to ask about general or physical health care because these are more common. On the other hand, it may be that clinicians weigh mental health problems more heavily, and thus

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<sup>4</sup> Risk assessment of TBI concerns was not coded because the coders were not medically trained professionals and experienced difficulty distinguishing between general physical health symptoms and TBI-specific discussion. One reason for this is that within the interviews, there was not a clear discussion of this portion of the risk assessment—it may be that clinicians are documenting this area at least in some cases without specific discussion of TBI symptoms.

previous treatment is less of a concern for making a referral. Regardless, the lack of systematic documentation about previous care is an issue for further consideration in terms of how clinicians approach the PDHRA process.

Clinician communication patterns were varied in terms of whether they were used and how frequently they were used during a single call. Variables that represent rapport building strategies were the most inconsistently used of all (i.e., some were used frequently, while others were used rarely). Empathy and legitimating statements rarely occurred. In fact, they occurred so infrequently that intended analysis could not be completed.

Intraclass correlations indicated that the majority of variance in clinician communication can be attributed to the SMs' self-report. Clinicians seem to tailor their communication patterns variables to the individual SM they are interviewing; the exception was that making personal remarks seems more related to the clinician than the SM.

Several results suggest that alcohol was handled differently than other concerns. The topic was more likely to be mentioned when the SM endorsed it; but endorsement did not seem to influence the clinicians' communication patterns. Furthermore, clinicians frequently minimized the concern and asked questions in a manner that may have encouraged SMs to indicate no problem (e.g., socially acceptable drinking). Five clinicians even went as far as to overtly declare the DoD guidelines were too strict while interviewing SMs, by saying things like even "looking at alcohol will get you flagged."

## **Relationship to Other Evaluation Findings**

Findings reported in this chapter indicate that many of the topics discussed and education given during the clinical interview were associated with the SM's self reported symptoms. This is similar to the findings in chapter 4 indicating that SM-reported problems were the best predictor of medical referrals. Additionally, chapter 6 results indicate that the variance in SM perceptions of the PDHRA was due more to the SM, not the setting of the PDHRA. These results suggest that the SM drives the PDHRA process more than any other factor.

Furthermore, it was reported in the present chapter that clinicians vary greatly in communication patterns they use during the PDHRA interview. This is in alignment with chapter 9, where it is reported that when multiple PDHRAs were completed for a single deployment, SM-reported problems were consistent between screenings, while the providers' reports and recommended referrals were not. This indicates that although clinicians may tailor their interview style based on SMs' self-reported symptoms, there is still overall inconsistency in how clinicians react to SMs and their symptoms.

It was also reported in the present chapter that the alcohol section of the PDHRA seemed to be handled differently than other areas of concern, both qualitatively and quantitatively. Chapter 8 shows that clinicians conducting in-person interviews were less likely to document a concern but more likely to refer compared to their call center counterparts when discussing alcohol and TBI. This indicates there may be a difference in the call center culture and the overall attitude of alcohol referral, compared to traveling teams. However, in chapter 10 clinicians report that they suspect up to a third of SMs do not fully disclose, especially related to mental health and alcohol

problems. This is supported by findings in chapter 6 that a significant minority of SMs admit they did not fully disclose alcohol (13.7%) or emotional (12.6%) problems. This suggests that clinicians should be careful not to minimize alcohol symptoms and should perhaps mention mental health issues even when not endorsed by the SM.

Physical health topics were mentioned in almost all calls, regardless of SM endorsement, while mental health topics were only discussed if already endorsed by the SM on the PDHRA. This is a concern given persistent perceptions of stigma associated with mental health treatment, as expressed by some unit leaders in chapter 10. Furthermore, active duty clinicians interviewed (chapter 10) suspected that up to a third of SMs were under-reporting symptoms on the PDHRA, especially mental health and alcohol problems. Findings in chapter 6 show that a substantial minority of SMs did not endorse behavioral health symptoms on the PDHRA, despite admitting to a problem on VU's SM survey. These SMs also had fewer clinician concerns and referrals, suggesting that clinicians did not discover the SMs' concerns. Together, these results suggest that more openness and attention is needed to mental health and alcohol issues during the PDHRA interview, regardless of SMs' endorsements on the PDHRA.

Finally, active duty clinicians who were interviewed<sup>5</sup> (chapter 10) expressed concern about the short duration of the interviews and noted that it was difficult to develop rapport with SMs in the short time allowed. This may explain the findings in the present chapter that there was large variability in use of rapport techniques, and relatively low use of what might be considered more complicated rapport techniques.

### **Limitations and Directions for Future Research**

The analyses presented here are based on approximately 150 interviews with a contracted agency, and are thus not generalizable to all PDHRA interviews. However, it should be noted that the contracted agency clinicians do receive standardized training and are monitored in a quality assurance process; thus, the findings of variability among clinicians and their documentation likely hold, or are to be even more pronounced in other PHDRA clinician populations where such training and oversight do not occur.

Further, the multistage sampling method was chosen because of the interest in producing a representative sample for that time period and for comparing clinicians. This strategy would allow for the maximum likelihood of obtaining enough calls so that each clinician was adequately represented, and further allow comparison between longer and shorter calls. Unfortunately, this strategy was ultimately unsuccessful because some calls could not be linked to a PDHRA (see Methods section). Further, a few clinicians unexpectedly used multiple Agent IDs. Therefore, we were unable to compare clinicians for this analysis as had been planned. In the future, it may be possible to address these problems and conduct further analyses after additional exploration of the influence of these problems on the sampling strategy to ensure appropriate ameliorative steps can be taken.

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<sup>5</sup> Due to OMB regulations we were not permitted to interview civilians, including clinicians working for the contracted agency that conducts nearly all Reserve and National Guard PDHRA screenings.

Finally, this was the first time RIAS coding had been used with this type of health risk appraisal. Although this was a strength as the first study to explore these types of interactions, this also means that further exploration of the data needs to occur to determine areas in need of refinement. As a related issue, a larger sample is necessary to be able to utilize the richness of the RIAS coding that captures communication patterns inherent in the interaction between SMs and clinicians. Too many of these categories were inappropriate for analysis due to low base rates.

More exploration of how clinician communication styles may influence PDHRA outcomes is needed, particularly since this is the first study of its kind for the PDHRA clinical interview. While there is an established literature on the types of communication patterns that seem conducive to positive health outcomes in primary care or other settings (e.g., compliance with treatment; Renzi, et al., 2002), it is not possible at this time to determine whether similar benchmarks could or should be applied to the PDHRA interview.

## **Chapter 8: Influence of Self-report and Interview Context on the PDHRA Process**

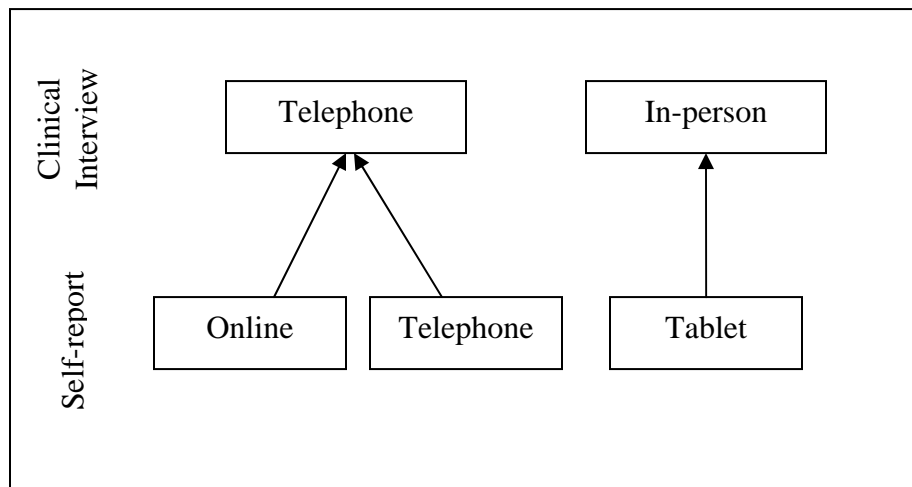
### ***Introduction***

#### **Background and Significance**

PDHRA screening for Service members (SMs) in the Reserve and National Guard is almost exclusively conducted by an agency contracted by the DoD. Screenings are conducted either by a call center or a travelling team, both staffed with clinicians to conduct the clinician interview portion of the PDHRA (DD Form 2900). SMs using the call center can complete the self-report (SR) portion of the DD Form 2900 either on the phone by talking with a customer service representative (not a health care provider) or online prior to calling in for the clinician interview. SMs screened by a travelling team complete the SR on a handheld computer tablet on the day of the PDHRA event. Thus, there are three contexts for completing the SR: (1) on the phone, (2) online, or (3) on a tablet. Each method differs not only in the technology used, but also the context in which the SR is completed. SMs completing the SR on the telephone or online could be either on or off duty, and alone or part of a group. The telephone SR requires the SMs to have the questions and potential answers read to them by the customer service representative, and then they must verbally report their answers. For the online SR, the SMs read the questions on the computer screen and enter their responses themselves.

Those completing the SR on the tablet are typically on duty, present at a PDHRA event as a unit, and completing it near (e.g., next chair, table or desk) others who are also completing the SR. SMs completing the SR on the tablet typically also receive a briefing about the PDHRA from their unit leadership and have resources such as representatives from Veterans Affairs present. In addition, there could be systematic differences in the characteristics of the SMs who complete the SR in different contexts. For example, it is more likely that those SMs completing the SR by phone are in smaller units or remotely located.

Regardless of SR context, the SM is subsequently interviewed by a clinician to complete the PDHRA process. Interviews are done via telephone for SRs completed on the phone or online, and in-person for SRs completed on the tablet. Thus, there are two interview contexts: (1) on the phone via the call center or (2) in-person with a travelling team. Travelling teams are available for units with more than 40 SMs to be screened. Smaller units and those SMs completing the process as individuals use the call center. Smaller units may also organize a “call center event” in which the unit calls in to complete the PDHRA process as a group during a specified time period. Thus, SMs completing a telephone interview may be on or off duty, alone, with their unit, or with others. Those completing an in-person interview are typically on duty and with their unit. This chapter explores how the context of the SR and clinician interview influences the PDHRA screening process. The figure below graphically represents the combinations of contexts for SR and clinical interview.

**Figure 8. 1. Contexts for PDHRA SM self-reports and clinical interviews**

## Objective

The overall goal of this chapter is to explore how SR and interview contexts influence the PDHRA process. First, we explore characteristics of the groups that participate in each context to determine whether there are pre-existing differences among the SR contexts. Second, we investigate whether or not there are differences in the type or prevalence of symptoms reported by SMs depending on the SR context. Third, we ask whether or not a given interview context influenced patterns in clinicians' documentation of risk assessment, concerns, or referral. Fourth, we investigate whether SR or clinician interview context influences the probability of SMs' acceptance or refusal of referrals.

## Study Design and Aims

The best approach to exploring the influence of context on the PDHRA process would have been to conduct a controlled randomized experiment in which SMs were randomly assigned to SR and interview contexts. Such an experiment was planned and approved for this evaluation. However, units were unable to be recruited for this experiment purportedly because the in-person interview was seen as superior to the phone interview. Thus, we were constrained to study groups that occurred through natural circumstances. The critical consequence of this non-experiment is that groups participating in each context are not equivalent in important characteristics such as Service Branch and component, time since returning from theater, location of deployment, etc. Therefore, the first part of this chapter describes differences among groups in each SR context. Once these measured differences were specified, subsequent analyses were conducted by attempting to statistically account for the known differences.

## ***Methods***

### **Data Sources**

The contracted agency provided DoD 135,049 records for PDHRAs completed between February 2008 and March 2009. These records indicated the context of both the SR and the clinician interview, and contained data elements that were used by DoD to link this information to the DD Form 2900. Thus, for each record provided, the SR and interview context were known and linked to the corresponding DD Form 2900. This link was created by DoD using social security number, which was stripped and replaced with a unique study ID prior to Vanderbilt University receiving the data so the information Vanderbilt received was de-identified.

A link between the contracted agency's records and the DD Form 2900 was created when the unique study ID were the same and when the date of clinician endorsement or the date of form completion of the DD Form 2900 were within one month of the PDHRA date indicated by the contracted agency. This one month grace period allowed for potential upload time into the DoD central data repository. Both date of completion and date of clinician endorsement were chosen as criteria to allow matches for Air Force active duty and Reserve SMs who were not required to speak with a clinician unless there was a positive response on the SR.

Vanderbilt University data management procedures included (1) retaining records for SMs who indicated that they had been deployed to Iraq or Afghanistan for more than thirty days; and (2) removing records where service Branch or component were Coast Guard (N = 3), Army Active (N = 320), Air Force Active (N = 11), Navy Active (N = 612), and Marine Active (N = 2,793). These records were removed from the data set because the contracted agency does not typically screen Active components, as indicated by the small numbers. The slightly larger number of Marine Active SMs screened was due to a temporary contract with the agency to screen this cohort, but still represents a relatively small number of the SMs screened by the contracted agency. Future research should compare these Marine Active SMs to Marine Reserve SMs. The final dataset represents only SMs in the Reserve/National Guard component.

Some SMs had matches to more than one PDHRA during the given time period. To be consistent with the rest of the report, only one completion per SM was chosen. If there were multiple completions from multiple deployments, then a random completion from the first deployment within the time period was kept. If there were multiple completions from the same deployment, then one random completion was kept. Same deployment was defined as departure from theater dates within 90 days of each other. In total, 941 records were deleted due to multiple matches.

The final dataset consisted of PDHRA and context data for 52,556 SMs. See Table 8.1 for the number of records at each step of the data cleaning.

**Table 8. 1. Data cleaning and final number of records**

	Number of Records
Number of records DoD received from contracted agency	135,049
Number of potentially linkable new (2008 version) PDHRAs (locations other than Iraq and Afghanistan deleted as well as those SMs who were Coast Guard or who had Service and component missing)	198,427
Number of agency records linked with PDHRA (criteria above)	57,549
Number of records where SM context information was complete	57,189
Keeping only one record per SM	56,248
Keeping only Reserve/National Guard	52,556
<b>Final number of records</b>	<b>52,556</b>

### Study Population

The population by Service Branch and component is presented in Table 8.2. Each record represents a single SM. The large majority (74.8%) of SMs were in the Army.

**Table 8. 2. Number of SMs by Service Branch and component**

Service Branch and Component	<i>N</i> =52,556	Percent
Army Reserve	15,292	29.1%
Army National Guard	24,023	45.7%
Air Force Reserve	756	1.4%
Air National Guard	5,474	10.4%
Navy Reserve	2,772	5.3%
Marine Reserve	4,239	8.1%

Table 8.3 shows that approximately equal numbers of SMs used each SR context.

**Table 8. 3. The context for completing the DD2900 self-report and clinician interview**

DD Form 2900 self-report			
Clinician Interview	Phone	Online	Tablet
In-person	n/a	n/a	15,695 (29.9%)
Telephone	19,837 (37.7%)	17,024 (32.4%)	n/a

### Analyses

The PDHRA scales (see Chapter 3) were the outcomes of interest for this study. Analyses were conducted to determine differences in outcomes depending on SR and clinician interview contexts.

Because SMs were not randomly assigned to SR context, the first step in analysis was to understand potential pre-existing differences among these groups. Several SM characteristics (see Chapter 3 for a complete description) that possibly influenced SR were examined: (1) date departed theater, (2) time between departure from theater and PDHRA, (3) Branch/component, (4) perceived combat exposure, and (5) deployment location (OIF, OEF, or both). In the remainder of this chapter, these factors are referred to as covariates because they co-vary with context, which is the factor of interest. In subsequent analyses we controlled for these covariate factors using regression analysis, essentially creating equivalent groups for analysis. That is, the factors that differed among groups were accounted for and could therefore not explain observed

differences in PDHRA indices. It should be noted that there are likely more covariates that may explain potential differences between contexts; however, these analyses were limited to those available in the data. Moreover, covariance analysis does not perfectly control for these differences, so the groups should be considered approximately similar, but certainly not identical.

Regression analysis was used to examine the number and types of SM reported problems depending on SR context and to examine differences in outcomes due to clinician interview context (telephone or in-person). Given the large sample size, most relationships were statistically significant. Effect sizes (ES) and odds ratios are better indicators of whether differences are meaningful by measuring the strength of the relationship between two variables. According to Cohen (1988, 1992), regression effect sizes of about 0.02 correspond to a small ES; 0.15 to a medium ES; and 0.35 to a large ES.

These analyses have used the classical hypothesis testing framework, where the null hypothesis tests for no differences (e.g., number of concerns reported in-person vs. phone interview are the same). The alternative hypothesis states that there is a difference in the outcomes of interest. According to this classical testing approach, the null hypothesis is rejected in favor of the alternative if the data provides enough evidence that the alternative is true. However, when there is no evidence that the alternative is true, the classical approach fails to prove the equivalence between groups. Equivalence testing is a different approach that should be used in future research. Equivalence testing has been widely used in drug trials (bio-equivalence) and other fields (Anderson & Hauck, 1983; Berger & Hsu, 1996; Stegner, Bostrom, & Greenfield, 1996; Wellek, 2002). Using this alternative approach, the question of interest is whether two modes are indistinguishable, or whether they are equivalent.

## ***Results***

### **SM Characteristics Differ by Self-report Context**

This section explored the following characteristics related to SR context: (1) PDHRA administration time, (2) SM cohort, (3) Branch/component, (4) combat exposure (yes, no, or missing/NA), and (5) deployment location (OIF, OEF, or both). These characteristics are defined in detail in Chapter 3.

#### ***Self-reports Completed by Telephone Were Late and Self-reports Completed Online Were Equally on Time and Late***

The PDHRA is intended to be completed within three to six months after returning from theater, but this is often not the case. PDHRA administration times ranged from February 28, 2008 to March 15, 2009 for this study sample. Because very few were early (that is, occurred before three months after return), those that were early or within the window were combined into one group for further analyses.

Table 8.4 shows that the time between departing theater and completing the PDHRA varies greatly depending on self-report context. The majority of SRs (71%) completed by telephone were late. SRs completed online were equally likely to be on time or late, while the majority (84%) of SRs completed by tablet were completed before or within the appropriate window.

**Table 8. 4. Relationship between self-report context and PDHRA administration time**

PDHRA Administration Time	SR Context		
	Phone (& Phone Interview) (N = 19,837)	Online (& Phone Interview) (N = 17,024)	Tablet (& In-Person Interview) (N = 15,695)
Early/ in window	29%	47%	84%
Late	71%	53%	16%

Among the group of PDHRAs administered late, there were differences in the number of years overdue by context. For SMs completing the SR by telephone, the median number of years overdue was 1.7 years (range = 6.9). Late SRs completed online or on the tablets were about one year overdue (medians = 1.1, 0.9, ranges = 6.6, 5.9 respectively).

***The Majority of SMs Departing Theater in 2008 Complete the SR by Tablet While SMs Departing in Earlier Years Complete the SR by Telephone***

While reviewing these results, it is important to remember that the dates shown represent dates departed theater, not dates of PDHRA completion. All PDHRAs in this sample were completed between February 28, 2008 and March 15, 2009. The dates that SMs departed theater ranged from June 25, 2001 to March 7, 2009.

Trends in how SMs complete the SR by date of departure are shown in Figure 8.2.

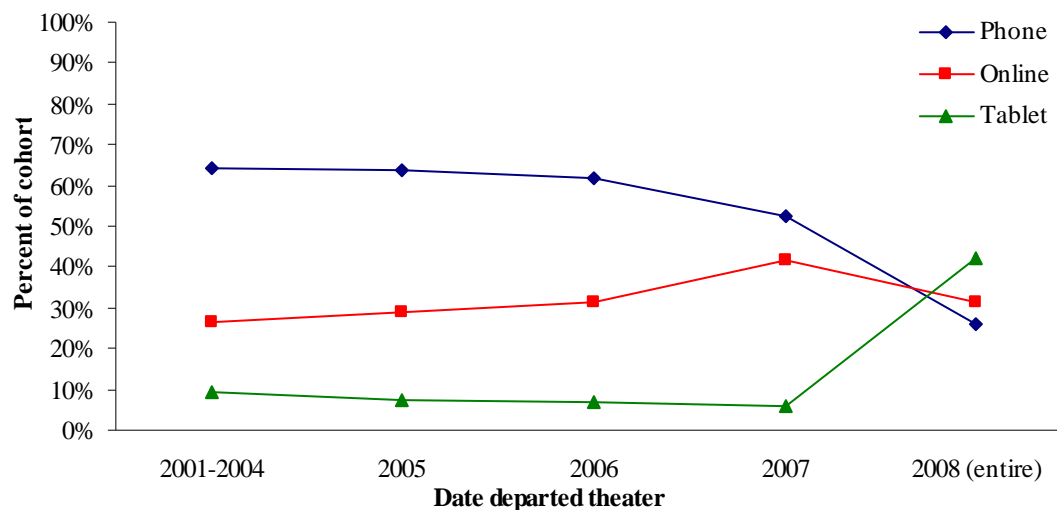
**Figure 8. 2. Relationship between self-report context and date SM departed theater**

Figure 8.2 shows that most (58.9%) SMs who departed theater between 2001 and 2007 (N = 18,642) completed the SR by telephone, 34.0% completed it online, and very few (7.1%) completed the SR by tablet. In contrast, the majority (42.4%) of those returning in 2008 (N = 33,914) used the tablet, with the remaining SMs about equally likely to complete the SR online (31.5%) or on the telephone (26.1%). This makes sense because SMs who departed theater

longer ago are more likely to be completing the DD Form 2900 on their own rather than with their unit.

### ***SRs on Tablet Were Completed Mostly by Army National Guard***

There were several differences in the SR context by Branch and component. Table 8.5 shows the percent of DD Form 2900s completed by SMs in each SR context by Branch and component. As can be seen in the table, the majority of SRs completed by telephone were Army Reserve and National Guard. For online SR completion, the majority were evenly split between Army Reserve and National Guard and Air National Guard. For tablet completion, the majority of SRs were completed by Army National Guard.

**Table 8. 5. Relationship between self-report context and Service Branch and component**

Branch and Component	SR context		
	Phone (& Phone Interview) (N = 19,837)	Online (& Phone Interview) (N = 17,024)	Tablet (& In-Person Interview) (N = 15,695)
Army Reserve	43%	29%	11%
Army National Guard	38%	29%	74%
Air Force Reserve	1%	4%	0%
Air National Guard	5%	26%	0%
Navy Reserve	7%	8%	0%
Marine Reserve	7%	4%	15%

### ***More SMs Completing SR on a Tablet had Reported Combat Exposure on PDHA***

Combat exposure was defined as a positive response to any of the three combat questions from the PDHA (questions 10-12 in the 2008 version or 7-9 in the 2003 version of the DD Form 2796 - “Did you encounter dead bodies or see people killed or wounded,” “Were you engaged in direct combat where you discharged a weapon,” and “Did you ever feel that you were in great danger of being killed”). See Appendix I for a complete description of combat exposure. Table 8.6 shows the percent of DD Form 2900s completed by SMs in each SR context by combat exposure. A higher percentage of SMs who completed the PDHRA on a tablet had reported combat exposure on their PDHA than SMs who completed in on the telephone or online (44% vs. 35% and 35%, respectively).

**Table 8. 6. Self-report context by combat exposure\***

Combat Exposure*	SR context		
	Phone (& Phone Interview) (N = 19,837)	Online (& Phone Interview) (N = 17,024)	Tablet (& In-Person Interview) (N = 15,695)
Yes	35%	35%	44%
No	26%	35%	40%
N/A**	39%	29%	15%

\*Combat exposure as defined by aggregating questions 10 to 12 from DD 2796 (all versions)

\*\* SMs who had no combat exposure information either could not be matched to an appropriate DD Form 2796 or failed to respond to all three combat exposure questions on the matched form (N=15,334).

***A Majority of SMs Deployed to Afghanistan Completed the SR Online, While SMs Deployed to Iraq Completed the SR Equally for Each of the Contexts***

Of the SMs in our sample deployed to Afghanistan, the largest group (45%) completed the SR online, with 33% completing on the phone and 23% on the tablet (see Table 8.7). Those who deployed only to Iraq were about equally likely to use each of the SR contexts. The number of SMs in the sample deployed to both locations was small (N=725), but they were more likely to complete the SR online or on a tablet than on the phone.

**Table 8. 7. Deployment location by self-report context**

	SR Context		
	Phone (& Phone Interview)	Online (& Phone Interview)	Tablet (& In-Person Interview)
Deployed to Afghanistan (N = 8,082)	33%	45%	23%
Deployed to Iraq (N = 43,749)	39%	30%	31%
Deployed to both Iraq and Afghanistan (N = 725)	23%	39%	39%

**Small Differences in SM Reported Symptoms Depending on Self-report Context**

The following analyses investigated whether the context of the SR (telephone, online, or tablet) influenced the type or prevalence of concerns reported by SMs. All analyses in this chapter from this point forward were conducted while controlling for the differing SM characteristics described in the previous section (see also Analyses section above).

Table 8.8 shows that the rate of the majority of SM self-reported problems were different by SR context, even after accounting for the SM characteristics. The exceptions were exposure concerns, depressive symptoms, and the overall PDHRA scale (a count of problem areas endorsed by the SM; see Chapter 3). It is important to note, however, that the effect sizes (ES) were close to zero; essentially this means that while the groups were statistically significantly different, the differences are not likely to be of practical concern.

**Table 8. 8. Results of regression comparing SM self-reported problems by SR context**

	F-value	p-value	Effect Size	R <sup>2</sup>
Q1-8 General health history	11.72	<.001	<.001	0.083
Q8a Physical health concerns	19.13	<.001	0.001	0.067
Q10a Exposure concerns	0.84	0.430	<.001	0.030
Q9d TBI symptoms	37.93	<.001	0.002	0.093
Q12 PTSD symptoms	16.75	<.001	0.001	0.100
Q14 Depressive symptoms	2.11	0.121	<.001	0.027
Q13 Alcohol problems	21.31	<.001	0.001	0.025
Q11 Relationship conflict (single item)	19.72	<.001	0.001	0.039
Q15-18 Requests for support	17.03	<.001	0.001	0.037
Overall PDHRA	1.85	0.157	<.001	0.108

It appears that the context of the SR has a very small to no influence on the type or number of problems that SMs document on the PDHRA. Table 8.9 shows the types of problems reported by SMs in each of the SR contexts (corresponding effect sizes are reported in Table 8.8).

Looking at Table 8.9, the most common pattern is that SMs completing the self-report by tablet report slightly higher rates of problems than SMs completing the self-report online, and sometimes by phone. One exception is for PTSD symptoms; SMs who completed the self-report by phone reported an average of one symptom, compared to less than one symptom when the self-report was completed online or by tablet.

**Table 8. 9. The mean number of items endorsed in each problem area depending on SR context**

	SR Context											
	Phone (& Phone Interview)			Online (& Phone Interview)			Tablet (& In-Person Interview)			Range		p-value
	N	Mean	SD	N	Mean	SD	N	Mean	SD	Min	Max	
Q1-8 General health history	19826	2.2	2.17	17013	1.94	2.11	15690	2.17	2.05	0	7	<.0001
Q8a Physical health concerns	19826	1.81	3.49	17013	1.75	3.11	15690	2.38	3.34	0	20	<.0001
Q10a Exposure concerns	19826	1.68	3.55	17013	1.66	3.14	15690	1.95	3.48	0	19	0.43
Q9d TBI symptoms	15954	0.65	1.56	12757	0.66	1.49	9644	0.57	1.45	0	7	<.0001
Q12 PTSD symptoms	19797	0.98	1.36	16945	0.59	1.16	15667	0.73	1.2	0	4	<.0001
Q14 Depressive symptoms	18192	0.24	0.58	16000	0.16	0.5	14756	0.17	0.5	0	2	0.12
Q13 Alcohol problems	19386	0.44	0.5	16631	0.4	0.49	15533	0.51	0.5	0	1	<.0001
Q11 Relationship conflict (single item)	19720	0.21	0.41	16878	0.23	0.42	15656	0.25	0.43	0	1	<.0001
Q15-18 Requests for support	19798	0.49	0.95	16969	0.35	0.8	15671	0.54	0.93	0	4	<.0001
Overall PDHRA	19826	3.05	2.37	17013	2.72	2.36	15690	3.24	2.34	0	9	0.16

### **Interview Context had a Very Small Effect on Documentation of SM Risk to Self or Others; Presence of TBI and Alcohol Problems Were More Likely to be Documented by Clinicians During Telephone Interviews**

Table 8.10 presents findings related to the influence of interview context on the clinician's risk assessment as documented on the PDHRA. However, it should be stressed that the relationship between SR context and interview context is confounded in this analysis. Telephone interviews are always associated with SM self-reports completed on the phone or online, while in-person

interviews are always associated with SM self-reports completed on a tablet. During the clinician interview, the clinician reviews the DD Form 2900 with the SM and conducts a risk assessment to determine risk of harm to self or others, risk of an alcohol problem, and risk of potential TBI. Because of this confounding, we cannot make firm conclusions about whether differences between the in-person interview and the telephone interview are only due to the format of the interview since the mode of data collection for SR also differs.

As indicated by the p-values, interview context was significantly associated with differences in risk assessment for all areas; however, this is not surprising since even small difference will reach statistical significance with a sufficiently large sample size. Of more interest are the odds ratios in the last column. These represent the size of the difference between contexts. The odds ratio is the relative probability for an SM to receive a positive screen on any of the risk assessment questions for an in-person interview compared to a telephone interview. The odds ratios are close to one for the risk assessment of self-harm or harm to others, indicating that interview context has a very small effect on whether the clinician documents a positive screen in these areas. Further, the means are very similar, if not identical. For example, an average of 4% of SMs screened positive for a referral indicated for potential harm to self or others regardless of whether interviews were conducted in-person or on the telephone and when controlling for number of SM reported problems.

There were, however, important differences for the alcohol and TBI risk assessment questions. For both, the presence of a potential problem was more likely to be documented by clinicians in telephone interviews than during in-person interviews. Specifically, SMs were about half as likely (odds ratio = 0.53) to receive a positive screen for TBI and even less likely (odds ratio = 0.40) to receive a positive screen for alcohol during in-person interviews compared to telephone interviews.

**Table 8. 10. Influence of interview context on clinician's risk assessment**

	Clinician Context							
	Phone			In-person			p-value	Odds Ratio
	N	Mean	SD	N	Mean	SD		
Clinician risk assessment: SM response to interview questions								
Q2a SM harm self (past month)	36697	0.02	0.13	15534	0.01	0.11	0.0008	0.72
Q2b SM harm other (since deployment)	36556	0.05	0.22	15528	0.04	0.21	<.0001	0.76
Clinician risk assessment: Clinician judgment								
Q3a SM current risk for harm self/other	36660	0.01	0.11	15550	0.01	0.09	0.0107	0.74
Q3b Risk assessment referral indicated	36563	0.04	0.20	15540	0.04	0.19	0.0016	0.82
Q4 Alcohol screening result	33902	0.39	0.49	14645	0.28	0.45	<.0001	0.40
Q4 Alcohol PCM referral indicated	33902	0.06	0.24	14645	0.20	0.40	<.0001	3.41
Q5 TBI risk assessment	33247	0.19	0.39	13948	0.14	0.35	<.0001	0.53
Q5 TBI referral indicated	33247	0.05	0.21	13948	0.10	0.30	<.0001	2.54

*Note: Because all variables are binary, indicating the presence or absence of a positive screen, the means and standard deviations can be interpreted as percentages*

### **Clinicians Were More Likely to Indicate a Referral for Alcohol Problems and TBI When the Interview was In-person**

Surprisingly, the opposite trend was observed in the clinicians' indication of a referral for TBI and alcohol. Although clinicians who conducted telephone interviews were more likely to identify problems, they were less likely to indicate that a referral was needed compared to clinicians who conducted in-person interviews. When interviewed in-person, SMs were 3 ½ times more likely to have a referral indicated for alcohol problems and 2 ½ times more likely to have one for TBI compared to SMs who were interviewed on the telephone.

To further explore these contradictory results, we computed correlations between the assessment (screening result) and the indication of a referral. For interviews conducted by telephone, the correlations were in the medium range ( $r = 0.32$  for alcohol and  $r = 0.47$  for TBI) indicating a moderate relationship between assessment findings and documented need for referral. The correlations were much larger for interviews conducted in-person, indicating a strong positive relationship ( $r = 0.78$  for alcohol and  $r = 0.83$  for TBI). Thus, there is a much stronger relationship between alcohol and TBI symptoms and referrals for in-person interviews than for telephone interviews. Note that these correlations do not control for number of SM reported problems, but such analyses should be conducted in the future.

Two possible scenarios might explain these results. First, it is possible that clinicians who conduct telephone interviews are more sensitive to potential alcohol and TBI problems, yet have

a higher threshold for determining the need for a referral. Second, it is possible that clinicians who conduct in-person interviews document positive screens for SMs who have more severe alcohol or TBI problems, and thus have a seemingly higher rate of referral. In either case, these results highlight inconsistency in how positive screening for alcohol and TBI are documented, and in how clinicians determine if a referral is indicated depending on the context of the interview.

In addition, interpretation of these results is influenced by an understanding of the software used by the clinician to complete their section of the DD Form 2900. This software differs by Branch, regardless of interview context. For the Army, the clinician is provided with the AUDIT-C score based on the SM's responses to alcohol questions in the self-report. It is then the responsibility of the clinician to decide if the SM has an alcohol problem and if a referral is warranted. In contrast, software used by the Navy, Marines, and Air Force do not provide the clinician with the AUDIT-C score, but rather *automatically* fill in, based on an algorithm, if there is an alcohol problem and that a referral is needed. It is then the responsibility of the clinician to uncheck the referral indication if they decide that none is needed. Most interviews completed by the contracted agency were for the Army, but the percentages differ slightly by interview context (70% telephone, 85% in-person; see Table 8.6). Thus, any influence of the Army's different procedures would be stronger in the in-person interviews than in the telephone interviews. There is no such difference in the TBI question (i.e., no automation), so the software difference cannot explain the TBI results, which are similar to the alcohol results, as described above.

### **Clinician Concerns are Similar for Telephone and In-person Interviews**

Table 8.11 shows findings related to the influence of interview context on the clinicians' concerns as documented on the PDHRA.

**Table 8. 11. Clinician interview context and documentation of concerns.**

	Clinician Context							
	Phone			In-person			p-value	
	N	Mean	SD	N	Mean	SD		
Clinician major concern: any	36861	0.26	0.44	15695	0.27	0.44	<.0001	0.78
Q7 Physical symptom(s)	36861	0.20	0.4	15695	0.20	0.4	<.0001	0.78
Q7 Exposure symptom(s)	36861	0.02	0.15	15695	0.03	0.17	0.0002	1.31
Q7 Depression symptom(s)	36861	0.07	0.25	15695	0.05	0.22	<.0001	0.66
Q7 PTSD symptoms	36861	0.10	0.3	15695	0.07	0.26	<.0001	0.54
Q7 Anger/Aggression symptoms	36861	0.02	0.14	15695	0.03	0.18	<.0001	1.56
Q7 Suicidal ideation	36861	0.01	0.07	15695	0.00	0.06	0.0513	0.69
Q7 Social/family conflict	36861	0.05	0.22	15695	0.05	0.22	<.0001	0.80
Q7 Alcohol use	36861	0.03	0.16	15695	0.03	0.16	0.0346	0.86
Q7 Other	36861	0.02	0.13	15695	0.01	0.09	<.0001	0.48

*Note: All variables are binary, indicating the presence or absence of a positive screen. Thus, the means and standard deviations can be interpreted as percentages.*

Generally, there were very small differences in documentation of specific types of concerns related to interview context. Of those with at least one concern documented, there was also very little difference in the number of concerns by interview context (mean = 1.98 for phone vs. 1.76 for in-person, ES = 0.003; not shown in table). In fact, the percentage of cases with specific concerns documented was nearly identical except for the four areas discussed below.

As can be seen in Table 8.11, clinicians who conducted in-person interviews were less likely (about 2/3 to 1/2 as likely) to document concerns about SM depressive or PTSD symptoms. However, the difference in terms of SMs identified were very small, with telephone interviews identifying 2% more SMs with depressive symptoms and 3% more with PTSD symptoms. These results provide some evidence that telephone interviews are sensitive enough to capture internalizing problems such as PTSD and depressive symptoms.

The picture is opposite for exposure symptoms and anger/aggression symptoms. Clinicians who conducted in-person interviews were more likely to document these symptoms, with the odds of identifying a concern being 1.3 times greater for exposure concerns and 1.6 times greater for anger and aggression symptoms. However, these differences represent only a 1% difference in the number of SMs, which may not be clinically meaningful. On the other hand, if this can be generalized, 1% still represents a large number of SMs. Although there were significant differences by interview context for the clinicians' documentation of risk assessment (see Table 8.10), it appears that documentation of concerns is very similar regardless of whether the SM was interviewed in-person or by telephone.

## Referrals are More Likely to be Given and More Likely to Be Accepted for In-person Interviews

The ultimate outcome of the PDHRA process is a referral. SMs receive referrals based on the clinician's review of the SR and the risk assessment. Because the referral is the result of interacting with the clinician, it is important to assess whether the context of the interaction (telephone vs. in-person) influences this outcome.

The likelihood of SMs receiving a referral was significantly influenced by interview context, as can be seen in Table 8.12. The table presents descriptive statistics and odds ratios for several categories of referral (see Chapter 3 for a description of the referral categories).

Two findings are of primary importance. First, despite documenting similar numbers and types of concerns (see Table 8.11), clinicians who conducted in-person interviews were more than three times as likely to give a medical referral than clinicians who conducted interviews by telephone. This translates into more than double the percentage of SMs who received a medical referral when interviewed in-person compared to telephone interviews. Recall that these differences were computed only after accounting for differences in SM characteristics (see section above titled "Characteristics of SMs related to SR context"). While attempting to create equivalent groups using statistical methods is not ideal, it does increase confidence in the observed referral pattern results.

**Table 8. 12. The relationship between interview context and referrals**

	Clinician Context							Odds Ratio
	Phone			In-person			p-value	
	N	Mean	SD	N	Mean	SD		
Q8 Any medical referral <sup>1</sup>	36861	0.19	0.39	15695	0.42	0.49	<.0001	3.11
Q8 Primary care	36861	0.17	0.38	15695	0.36	0.48	<.0001	2.55
Q8 Behavioral care	36861	0.08	0.27	15695	0.18	0.39	<.0001	2.96
Q8 Specialty physical care	36861	0.00	0.07	15695	0.02	0.15	<.0001	4.63
Q8 Military OneSource	36861	0.09	0.28	15695	0.07	0.25	<.0001	0.69
Q8 Other non medical care	36861	0.03	0.16	15695	0.02	0.15	<.0001	0.68
Q11 SM declined referral	36861	0.09	0.29	15695	0.05	0.22	< .0001	0.44

<sup>1</sup> This category includes all primary care, behavioral care, and specialty care referrals. It does not include cases where no referral was documented but the clinician documented that the SM declined a referral.

It is important to note that there were some cases (N = 3,457, 6.6 %) where no referral was documented in question eight, yet the clinician endorsed question 11 (the SM declined referral). These cases were interpreted as 'non-documented referrals', meaning that a referral had been intended by the clinician but was simply not documented because the SM had declined the referral. Therefore, a model was estimated to explore the influence of interview context on the presence or absence of any referral, which includes medical, non-medical, Military OneSource, and non-documented referrals. The odds ratio dropped slightly to 2.42, still indicating that more referrals of any type are documented for in-person interviews than for telephone interviews. Note that while the inclusion of non-documented referrals may have decreased the odds ratio, the inclusion of non-medical and Military OneSource referrals had an influence on the decrease.

Thus, it appears that non-documented referrals do not solely explain the observed differences in referral patterns by interview context.

Although there were differences in the likelihood of referrals, among SMs who had at least one referral, including non-documented referrals, there were no meaningful difference ( $ES > 0.001$ ) in the number of referrals by interview context (telephone - mean 1.45, SD 0.79; in-person – mean 1.5, SD 0.8; not in table). Taken together, these results indicate that although clinicians conducting the interview in-person are more likely to give referrals (potentially because SMs report slightly more problems when the SR is completed on tablet), when at least one referral is given, the number of referrals is similar regardless of interview context.

We also report the findings for specific types of referrals (e.g., behavioral care, Military OneSource) in Table 8.12 above. However, these are not interpreted here because it is probable that external factors outside the clinician's control may exert influence on the type of referral that is made. For example, it is our understanding that the general instruction to call center clinicians, who conduct telephone interviews, is to refer to primary care for a medical referral. For on-site interviews that are conducted in-person, clinicians may receive additional referral resources unique to that location, which may contribute to a wider variety of referrals.

### **SMs Were Half as Likely to Decline a Referral When Interviewed In-person**

The second important finding is in SMs' declination of referrals. According to the clinician documentation of question 11 on the PDHRA, SMs were 1/2 as likely to decline a referral when interviewed in-person compared to SMs interviewing by telephone. Nearly double the percentage of SMs declined a referral when interviewed by telephone compared to in-person. This may be due at least in part to the presence of resources to which the SM can be referred, e.g., the VA, unit leadership introductions of the PDHRA, and, in many cases, educational presentations such as Battlemind II at the in-person PDHRA events.

### ***Conclusions***

In sum, the characteristics of the SMs were different depending on the SR context, but self-reported problems were similar for all SMs once these differences were controlled for in analysis. Despite similarity in SM reported problems, clinicians differed by context in their assessment of SMs' potential alcohol and TBI problems and need for referral. Clinicians were less likely to indicate a problem related to alcohol and TBI when the interview was in-person, but they were much more likely to indicate the need for a referral for alcohol and TBI when the interview was in-person. Finally, despite similarity of documentation of major concerns across interview contexts, medical referrals were more likely to be given in-person than on the telephone. In addition, referrals were less likely to be declined by the SM when the interview was conducted in-person in the group event context.

### **Relationship to Other Evaluation Findings**

It was reported in this chapter that clinicians were 3.5 times more likely to give alcohol referrals when conducting in-person interviews versus telephone interviews. The results presented in chapter 7 may provide some explanation of this finding. It was determined both anecdotally and quantitatively that telephone clinicians tend to minimize alcohol symptoms (since no in-person interviews were analyzed, we do not know if minimization occurred for these interviews or not).

Multiple instances were documented in which the telephone clinicians minimized the alcohol section, indicating to the SM that it was too sensitive. This belief about the over-sensitivity of the alcohol scale may be consistent throughout the call center culture and might be the cause for the reduced number of alcohol referrals. However, an alternative interpretation is that the alcohol section is, in fact, too sensitive, and that telephone clinicians are increasing specificity (referring only those who really have a problem). This interpretation is supported by results presented in chapter 4 related to the additional alcohol questions added to the 2008 version PDHRA. Positive screenings on the 2008 PDHRA were dramatically greater than on the 2005 PDHRA, but referral rates were nearly identical.

This chapter also reports that discussion of TBI was handled differently during in-person versus call center interviews. In chapter 7 it was reported that TBI was a particularly difficult topic to code since clinicians rarely mentioned it by name, making the co-morbid physical and mental symptoms difficult to differentiate. There was at least one instance, however, where a call center clinician seemed to refer the SM for the physical symptoms associated with the documented TBI without ever mentioning the possibility of a head injury or neurological testing. It is possible that call center clinicians handle potential cases of TBI differently from in-person clinicians.

In chapter 4 it was found that all the sections of the PDHRA working together accounted for 27% of the variance in referral. Perhaps at least a portion of the remaining 73% of variance may be related to a lack of systematic approach in the interview itself as found in this chapter for TBI and alcohol.

In chapter 10, some clinicians (active duty) mentioned using SM eye contact and expression to help guide the interview. Given that referrals were more likely to be given and accepted by SMs when interviewed in-person compared to on the telephone, such non-verbal cues may be important to conducting the PDHRA. However, it was also found that documentation of clinician concerns was similar regardless of context. It is interesting to note that clinician concerns were similar, yet there were such marked differences in referrals given and declinations. The reasons for these differences are not clear at this time. The difference could be due to 1) context (i.e., the telephone interview is inferior in terms of referral acceptance), 2) the existence of more referral support services at in-person events, or 3) the group context of in-person events, although the latter may not be a factor as it is not clear why completing the PDHRA in a group would result in more referrals.

### **Limitations and Directions for Future Research**

The analyses in this chapter were limited to Reserve and National Guard SMs, and most of the sample was Army National Guard, so these findings may not generalize to SMs in the Active Branches. Further, differences among components may have been difficult to detect in these data due to low numbers. At this time only a very small number of active duty Army and Marine SMs who are geographically distant from a military base screen by telephone.

As already mentioned, the ideal method to address the question of the influence of SR and interview context on PDHRA outcomes is an experimental design. Because this was not possible, we instead attempted to create equivalent groups for analyses by adjusting for a variety

of SM characteristics. This adjustment was limited to the information available in the datasets; other potentially important factors may not have been included.

## **Chapter 9: Little Agreement Among Clinicians on Multiple Administrations of PDHAs and PDHRAs for the Same Deployment**

### ***Introduction***

#### **Background and Significance**

A small percentage of SMs complete the PDHA or PDHRA multiple times for the same deployment. This happens for several reasons. For example, because medical records during deployment are kept in a separate electronic database from medical records while not deployed, the PDHA may be administered in theater before the deployment is completed and again out of theater when the SM returns home. The causes for repeated administrations of the PDHRA are more difficult to explain. DoD policy indicates that when there are multiple completions of the PDHA or PDHRA, the most recent completion should be retained in medical records. However, each Service, component, MTF, etc., may have policies that differ somewhat from the DoD policy. Thus, it is important to evaluate whether there are systematic differences across multiple administrations in how SMs report problems and concerns on the self-report, and similarly, how clinicians document risk assessment, concerns, and referrals. Such information could be useful to guide policy decisions on determining which PDHA or PDHRA to use for official records.

#### **Objective**

This chapter explores the relationship between multiple PDHAs and PDHRAs when multiple forms are completed by an SM for the same deployment. Multiple PDHAs and PDHRAs completed for the same deployments offer an opportunity to explore the reliability of SM self-reported responses and reliability of clinician documentation of the interview. While there may be some differences simply due to the passage of time (e.g., the appearance of new symptoms or symptoms that were resolved), it would be expected that SM and clinician reports would be fairly similar in reliability, particularly across shorter time frames. Given that it is unlikely that the same clinician interviewed the same SM twice it is also likely that the reliability is lower for the clinicians given that it is not the same clinician each time. The primary objective in this chapter is to determine whether there are differences in how similar responses are over time for the SM and clinician for the PDHA and PDHRA, respectively.

#### **Study Design and Aims**

This chapter uses a naturally occurring subset of PDHA and PDHRA records where there were multiple forms completed for the same deployment. Study aims included: (1) Describing the relationship between SM self-report indices and clinician documentation of the interview (sections include risk assessment, concerns, referrals made, and whether the SM declined a referral) across repeated administrations; (2) Determining whether the time that elapsed between administrations influenced the reliability of responses.

## Methods

### Data Sources

The study sample was created from the original PDHA and PDHRA records, limited to DD Form 2796 (January 2008 version) and DD Form 2900 (January 2008 version) (317,142 and 256,001, respectively). The procedure for choosing records was the same for both PDHA and PDHRA datasets. First, all records for those SMs who completed multiple forms were kept (27% and 2% of the original datasets for PDHA and PDHRA respectively). Very few SMs had more than two forms (719 of 45,277 SMs for the PDHA and 33 of 2,991 SMs for the PDHRA), so only the first two observations were retained for analysis. From these, only observations from the same deployment were kept, defined as departure dates within 90 days of each other. A small percentage of SMs deploy much more frequently, possibly within 90 days of the previous deployment. These SMs could not be differentiated from SMs who completed multiple forms for the same deployment, so they may be included in the current sample. Despite this, the multiple assessments in the sample are assumed to be from the same deployment. Forms that were completed for departure dates greater than 90 days apart were considered separate deployments and thus not eligible for these analyses. In addition, only SMs who indicated they were deployed to Iraq or Afghanistan were retained for analysis. Table 9.1 shows the number of observations throughout every step of the dataset creation process. It is notable that there are substantially fewer SMs with two PDHRA completions for the same deployment compared to the PDHA.

**Table 9. 1. Number of records in final dataset**

	<b>PDHA Number of Records</b>	<b>PDHRA Number of Records</b>
Records with multiple entries	86,559	5,804
First two records per SM	85,831	5,768
Records from same deployment	81,555	4,722
Only records from OIF/OEF	75,498	3,720
<b>Final number of records</b>	<b>75,498 (37,749 SMs)</b>	<b>3,720 (1,860 SMs)</b>

Although the deployment departure dates must fall within 90 days or less per the definition above, the time between actual completions of the forms was not restricted. The time between administrations of the two selected forms averaged 32 days (SD=14 days) for the PDHA and 66 days (SD=58 days) for the PDHRA.

### Study Population

The population by Service Branch and component is presented in Table 9.2. Each record represents a single SM.

**Table 9. 2. Number of SMs by Service Branch and component**

<b>Service Branch and Component</b>	<b>PDHA</b>		<b>PDHRA</b>	
	<i>N=37,749</i>	Percent	<i>N= 1,860</i>	Percent
Army Active	29558	78.3%	652	35.1%
Army Reserve	2654	7.0%	240	12.9%
Army National Guard	4977	13.2%	481	25.9%
Air Force Active	182	0.5%	83	4.5%
Air Force Reserve	23	0.1%	12	0.7%

Air National Guard	68	0.2%	23	1.2%
Navy Active	135	0.4%	61	3.3%
Navy Reserve	45	0.1%	29	1.6%
Marine Active	67	0.2%	241	13.0%
Marine Forces Reserve	40	0.1%	38	2.0%

As can be seen in the table, the great majority of SMs with multiple PDHAs were Army active duty. Anecdotally, it was learned that the Army often had Soldiers complete the PDHA both in theater and also upon return to the United States. The fact that they constitute 98.5% of the PDHA sample supports that anecdote. It also should be noted that any findings related to the PDHA are primarily relevant to the Army. The two largest groups for multiple PDHRAs were Army Active and Army National Guard.

### **Analyses**

The PDHA and PDHRA indices (see Chapter 3) were the outcomes for this study, with analyses conducted to determine the relationship between similar outcomes at the different time points (e.g., SM exposure concerns as documented on both completions of the PDHA). Correlations were computed to determine the relationship between the first and second completions of the PDHA and PDHRA. Spearman's rho was computed for binary variables and Pearson's *r* for continuous variables. Given the large sample size, almost all relationships were statistically significant. Effect sizes are better indicators of whether differences are meaningful by measuring the strength of the relationship between two variables. Effect sizes (ES) for correlations vary between -1 and +1. According to Cohen (1988, 1992), correlations of about 0.1 correspond to a small ES; 0.3 to a medium ES; and 0.5 to a large ES.

In order to understand how the relationship between completions changed over time, correlations were computed for SMs by number of weeks between administrations for up to six weeks. Correlations were computed for all the outcomes of interest and then averaged together to create a mean SM and clinician correlation per week. The slope over time for mean SM and clinician responses was fitted using standard regression techniques.

### **Results**

#### **Strong Agreement in SM Responses Between Multiple PDHAs and PDHRAs**

Tables 9.3 and 9.4 present the correlations between the first and second completion for each SM self-reported outcome of interest on the PDHA and PDHRA, respectively. Note that in all tables the means for binary items (those that have a minimum of zero and a maximum of one) are equivalent to the percent of SMs or clinicians who endorsed that item. All correlations were statistically significant. To interpret the correlations in Table 9.3 and 9.4, particularly because they are all significant, use Cohen's (1988, 1992) guidelines that correlations around 0.1 are considered small, 0.3 are considered medium, and 0.5 are considered large. The tables show that in general, SMs complete the self-report section of the forms reliably over time (correlations in the 0.8-0.9 range for the PDHA and 0.6-0.9 range for the PDHRA).

**Table 9.3. Correlations between first and second PDHA completions - SM self-reported problems**

	Corr <sup>1</sup>	N	First Completion				Second Completion			
			Mean <sup>2</sup>	SD	Min	Max	Mean <sup>2</sup>	SD	Min	Max
SM concerns										
Q1-7 General health history	0.92	37669	1.93	1.64	0	7	1.71	1.61	0	7
Q8 Physical health concerns	0.92	37749	1.96	3.13	0	21	1.83	2.99	0	21
Q16-19 Exposure concerns	0.91	37564	3.16	4.29	0	21	3.39	4.36	0	21
Q9 TBI symptoms	0.89	30647	0.37	1.02	0	6	0.33	0.96	0	6
Q13 PTSD symptoms	0.88	35928	0.20	0.55	0	2	0.18	0.51	0	2
Q14 Depressive symptoms	0.86	35584	0.19	0.51	0	2	0.15	0.46	0	2
Q15 Alcohol problems	0.90	35944	0.31	0.46	0	1	0.32	0.46	0	1
Q24-27 Requests for support	0.89	37546	0.43	0.79	0	4	0.41	0.77	0	4
Overall PDHA	0.92	37749	2.53	1.90	0	8	2.46	1.84	0	8

<sup>1</sup>Correlations are Spearman's rho for binary variables; Pearson's r for continuous variables

<sup>2</sup>Note that means for binary items are equivalent to the percent of SMs who endorsed that item.

As seen in table 9.3, all of the correlations for the PDHA are above 0.8. This indicates that SMs are generally reporting similar types of problems and concerns, and similar intensity of problems and concerns for those indices with multiple items (e.g., exposure concerns). For all indices except exposure concerns and alcohol problems, the number of SM concerns was slightly higher on the first completion compared to the second completion.

As seen in table 9.4 below, there was greater variability in the relationship between SM responses across administrations of the PDHRA for the same deployment, compared to the PDHA. However, all correlations are consistent with large effect sizes. Interestingly, as opposed to the lack of a pattern in the change in PDHA mean responses over time, on the PDHRA SMs reported slightly more problems at the second administration for several of the indices. The largest increase in problems occurred for physical health concerns and for exposure concerns (0.3 and 0.4 more concerns at the second administration, respectively). It is possible that the larger increase for the PDHRA compared to the PDHA is related at least in part to the time between form completions. As stated above in the Data Sources section, the time between administrations for the PDHRA was approximately twice that of the PDHA.

**Table 9. 4. Correlations between first and second PDHRA completions - SM self-reported problems**

	Corr <sup>1</sup>	N	First Completion				Second Completion			
			Mean <sup>2</sup>	SD	Min	Max	Mean <sup>2</sup>	SD	Min	Max
SM concerns										
Q1-8 General health history	0.83	1860	2.12	2.07	0	7	2.21	2.15	0	7
Q8a Physical health concerns	0.77	1860	2.11	3.38	0	20	2.41	3.69	0	20
Q10a Exposure concerns	0.69	1860	1.97	3.49	0	19	2.37	3.83	0	19
Q9d TBI symptoms	0.87	1310	0.84	1.50	0	7	0.90	1.69	0	7
Q12 PTSD symptoms	0.80	1797	0.73	1.24	0	4	0.78	1.30	0	4
Q14 Depressive symptoms	0.74	1626	0.22	0.57	0	2	0.22	0.56	0	2
Q13 Alcohol problems	0.63	1717	0.48	0.50	0	1	0.44	0.50	0	1
Q11 Relationship conflict (single item)	0.69	1773	0.24	0.43	0	1	0.25	0.43	0	1
Q15-18 Requests for support	0.66	1806	0.49	0.92	0	4	0.48	0.91	0	4
Overall PDHRA	0.80	1860	3.19	2.46	0	9	3.22	2.50	0	9

<sup>1</sup>Correlations are Spearman's rho for binary variables; Pearson's r for continuous variables

<sup>2</sup>Note that means for binary items are equivalent to the percent of SMs who endorsed that item.

### **Weak Agreement in Clinician Judgments Across Multiple PDHAs and PDHRAs**

Tables 9.5 and 9.6 present the correlations between the first and second completion for each clinician-reported outcome of interest on the PDHA and PDHRA, respectively. All of the correlations were significant except for question 14 on the PDHA (whether or not the SM declined the referral). To interpret the correlations in Table 9.5 and 9.6, particularly because most of them are significant, use Cohen's (1988, 1992) guidelines that correlations around 0.1 are considered small, 0.3 are considered medium, and 0.5 are considered large. Compared to the SM self-report presented above, the correlations for the clinician portion of the forms are much lower (ranging from 0.1 to 0.6 for the PDHA and 0.2 to 0.5 for the PDHRA). Due to typical procedures for administration of the PDHA and PDHRA, it should be noted that SMs are not likely to interview with the same clinician for both observations. There is no way to know this information for this report because clinician identity was not available in the AFHSC records from which the evaluation data were drawn.

**Table 9. 5. Correlations between first and second PDHA completions - clinician concerns**

	Corr <sup>1</sup>	N	First Completion				Second Completion			
			Mean <sup>2</sup>	SD	Min	Max	Mean <sup>2</sup>	SD	Min	Max
Clinician risk assessment: SM response to interview questions										
Q3a SM harm self (past month)	0.24	31286	0.01	0.1	0	1	0	0.1	0	1
Q3b SM harm other (since deployment)	0.23	29603	0.03	0.2	0	1	0.02	0.1	0	1
Clinician risk assessment: Clinician judgment										
Q4a SM current risk for harm self/other	0.17	31436	0.01	0.1	0	1	0	0.1	0	1
Q4b Risk assessment referral indicated	0.2	31364	0.02	0.1	0	1	0.01	0.1	0	1
Q5 Alcohol PCM referral indicated	0.37	36911	0.12	0.3	0	1	0.18	0.4	0	1
Q5 Alcohol screening result	0.48	36911	0.16	0.4	0	1	0.23	0.4	0	1
Q7 TBI risk assessment	0.3	30096	0.1	0.3	0	1	0.06	0.2	0	1
Q7 TBI referral indicated	0.35	30096	0.05	0.2	0	1	0.04	0.2	0	1
Q8 Tuberculosis risk assessment (TB)	0.62	36250	0.42	0.5	0	1	0.41	0.5	0	1
Q8 TB PCM referral	0.61	36250	0.41	0.5	0	1	0.41	0.5	0	1
Q9 Depleted Uranium assessment	0.51	36704	0.09	0.3	0	1	0.13	0.3	0	1
Q9 Depleted Uranium referral	0.47	36704	0.08	0.3	0	1	0.12	0.3	0	1
Clinician major concerns										
Q11 Number of major concerns	0.2	37749	0.1	0.4	0	9	0.16	0.5	0	9
Q11 Physical symptom(s)	0.16	37749	0.05	0.2	0	1	0.1	0.3	0	1
Q11 Exposure symptom(s)	0.07	37749	0.01	0.1	0	1	0.01	0.1	0	1
Q11 Environmental concerns	0.03	37749	0	0.1	0	1	0	0	0	1
Q11 Occupational concerns	0.08	37749	0	0.1	0	1	0	0	0	1
Q11 Combat concerns	0.09	37749	0	0.1	0	1	0.01	0.1	0	1
Q11 Depression symptom(s)	0.15	37749	0.01	0.1	0	1	0.01	0.1	0	1
Q11 PTSD symptoms	0.16	37749	0.01	0.1	0	1	0.01	0.1	0	1
Q11 Anger/Aggression symptoms	0.1	37749	0.01	0.1	0	1	0.01	0.1	0	1
Q11 Suicidal ideation	0.17	37749	0	0	0	1	0	0	0	1
Q11 Social/family conflict	0.1	37749	0	0.1	0	1	0	0.1	0	1
Q11 Alcohol use	0.06	37749	0	0.1	0	1	0	0.1	0	1

	Corr <sup>1</sup>	N	First Completion				Second Completion			
			Mean <sup>2</sup>	SD	Min	Max	Mean <sup>2</sup>	SD	Min	Max
Q11 Other	0.04	37749	0	0.1	0	1	0.01	0.1	0	1
<b>Referrals</b>										
Q12 Number of referrals	0.27	37749	0.54	0.9	0	9	0.55	0.8	0	10
Q12 Any referral	0.25	37749	0.37	0.5	0	1	0.39	0.5	0	1
Q12 Any medical referral	0.22	37749	0.34	0.5	0	1	0.31	0.5	0	1
Q12 Primary care	0.16	37749	0.2	0.4	0	1	0.22	0.4	0	1
Q12 Behavioral care	0.28	37749	0.08	0.3	0	1	0.07	0.3	0	1
Q12 Specialty physical care	0.15	37749	0.15	0.4	0	1	0.1	0.3	0	1
Q12 Military OneSource	0.05	37749	0.01	0.1	0	1	0.01	0.1	0	1
Q12 Other non-medical referral	0.11	37749	0.06	0.2	0	1	0.1	0.3	0	1
Q14 SM declined referral	0.02*	37745	0.01	0.1	0	1	0.03	0.2	0	1

\*Not significant;  $p > .01$

<sup>1</sup>Correlations are Spearman's rho for binary variables; Pearson's r for continuous variables

<sup>2</sup> Note that means for binary items are equivalent to the percent of SMs or clinicians who endorsed that item.

As can be seen in table 9.5 above, the correlations varied widely on the clinician risk assessment portion of the PDHA, from non-significant to 0.62 (large ES). The greatest similarity in clinician risk assessment across multiple administrations was for tuberculosis and depleted uranium, while the lowest were for the clinician's assessment of SM's risk of harm to self or others. However, even for tuberculosis risk, where  $r = 0.61$ , there were more clinicians who reported different answers across the two administrations than reported the same answer (37% agreed present or absent [ $0.61*0.61$ ]).

There was greater assessment of risk associated with alcohol and depleted uranium over time, with other areas of risk remaining about the same or slightly lower on average. It is possible that these differences are reflective of the nature of the risk assessment areas, where tuberculosis and depleted uranium are ongoing problems while risk of SM harm to self or others may be more acute or short-term problems that varied within the time frame of repeated administrations of the form.

It is important to note that question 3 (a and b) of the risk assessment is the clinician's documentation of direct questions posed to the SM; while question 4 (a and b) are related to the clinician's assessment based on the SM responses. Further, question 3a is limited to the past month. Therefore, we looked specifically at these two questions only for forms completed within a week or less. The averaged correlations for all were higher but still low, indicating low levels of agreement: (0.58 and 0.42 for questions 3 and 4 respectively).

The correlations were lowest in the sections of the PDHA where the clinician documented areas of major concern and associated referrals, with effects sizes ranging from low to medium. The average number of major concerns and physical symptom concerns increased over time, with all

other concerns averaging about the same. Across administrations, there was a very slight increase in the average number of referrals and whether a referral of any kind was documented. This appears largely due to an increase in non-medical referrals other than Military OneSource, and a very slight average increase in primary care referrals. Given the likelihood that the clinicians were not the same people at the two administrations, this may indicate that clinicians both evaluate the information in the SM self-report and conduct their interviews differently, leading to a lack of systematic assessments and documentation of concerns and associated referrals.

As can be seen in table 9.6, the correlations on all sections of the clinician interview for the PDHRA were generally higher than those on the PDHA. However, with the exception of the TBI risk assessment, the effect sizes are in the small to medium range. For the TBI risk assessment, the results indicate a strong level of agreement by clinicians across multiple administrations. The average risk in all areas remained largely the same (as indicated by the means) across time, although there was a very slight increase in clinicians documenting the need for a referral associated with alcohol problems.

Similar to the PDHA, question 2 (a and b) of the PDHRA risk assessment reflects the clinician's documentation of direct questions posed to the SM, while question 3 (a and b) is the clinician's assessment based on the SM responses. Question 2a is limited to the past month. The average correlations for these two sets of questions for forms completed within a week or less were substantially higher. Consistent with large effect sizes, the correlation was 0.71 for question 2 (a and b) and 0.63 for question 3 (a and b).

**Table 9. 6. Correlations between first and second PDHRA completions- clinician concerns**

	Corr <sup>1</sup>	N	First Completion				Second Completion			
			Mean <sup>2</sup>	SD	Min	Max	Mean <sup>2</sup>	SD	Min	Max
Clinician risk assessment: SM response to interview questions										
Q2a SM harm self (past month)	0.49	1704	0.02	0.14	0	1	0.02	0.12	0	1
Q2b SM harm other (since deployment)	0.40	1674	0.05	0.21	0	1	0.04	0.19	0	1
Clinician risk assessment: Clinician judgment										
Q3a SM current risk for harm self/other	0.22	1703	0.02	0.12	0	1	0.01	0.08	0	1
Q3b Risk assessment referral indicated	0.46	1691	0.04	0.20	0	1	0.03	0.18	0	1
Q4 Alcohol screening result	0.44	1548	0.32	0.47	0	1	0.31	0.46	0	1
Q4 Alcohol PCM referral indicated	0.32	1548	0.12	0.32	0	1	0.16	0.37	0	1
Q5 TBI risk assessment	0.61	1451	0.21	0.40	0	1	0.20	0.40	0	1
Q5 TBI referral indicated	0.51	1451	0.09	0.28	0	1	0.10	0.30	0	1
Clinician major concerns										
Q7 Number of major concerns	0.39	1860	0.42	0.92	0	7	0.50	1.10	0	8
Q7 Physical symptom(s)	0.40	1860	0.19	0.39	0	1	0.21	0.40	0	1
Q7 Exposure symptom(s)	0.19	1860	0.02	0.14	0	1	0.03	0.18	0	1
Q7 Depression symptom(s)	0.29	1860	0.05	0.21	0	1	0.06	0.24	0	1
Q7 PTSD symptoms	0.35	1860	0.07	0.25	0	1	0.08	0.27	0	1
Q7 Anger/Aggression symptoms	0.39	1860	0.03	0.16	0	1	0.02	0.16	0	1
Q7 Suicidal ideation	0.14	1860	0.00	0.06	0	1	0.00	0.07	0	1
Q7 Social/family conflict	0.29	1860	0.04	0.19	0	1	0.05	0.21	0	1
Q7 Alcohol use	0.24	1860	0.02	0.13	0	1	0.03	0.16	0	1
Q7 Other	0.17	1860	0.01	0.11	0	1	0.02	0.13	0	1
Referrals										
Q8 Number of referrals	0.38	1860	0.56	0.94	0	9	0.59	0.93	0	7
Q8 Any referral	0.39	1860	0.32	0.48	0	1	0.38	0.49	0	1
Q8 Any medical referral	0.44	1860	0.26	0.44	0	1	0.29	0.45	0	1
Q8 Primary care	0.41	1860	0.36	0.40	0	1	0.24	0.43	0	1
Q8 Behavioral care	0.41	1860	0.09	0.29	0	1	0.11	0.32	0	1
Q8 Specialty physical care	0.14	1860	0.05	0.21	0	1	0.03	0.17	0	1
Q8 Military OneSource	0.20	1860	0.07	0.26	0	1	0.07	0.25	0	1
Q8 Other Non-medical care	0.32	1860	0.07	0.25	0	1	0.07	0.26	0	1
Q11 SM declined referral	0.17	1860	0.05	0.22	0	1	0.04	0.20	0	1

<sup>1</sup>Correlations are Spearman's rho for binary variables; Pearson's r for continuous variables

<sup>2</sup>Note that means for binary items are equivalent to the percent of SMs or clinicians who endorsed that item.

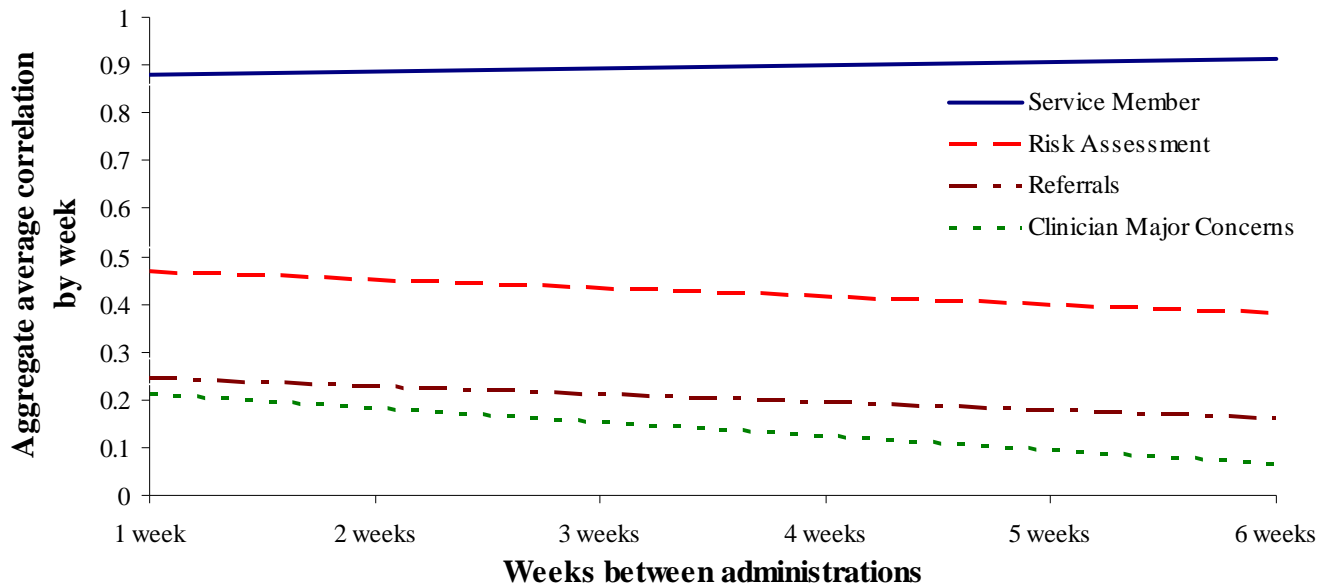
Unlike the PDHA, clinicians documented more major concerns on average at the second administration of the PDHRA compared to the first, with the exceptions of anger/aggression symptoms and suicidal ideation. Corresponding results were found for referrals, with slightly higher number of referrals and whether a referral of any kind was documented at the second administration. However, there were 12% fewer primary care referrals at the second administration compared to the first administration.

### **SM PDHA Responses are Stable and Reliable Over Time**

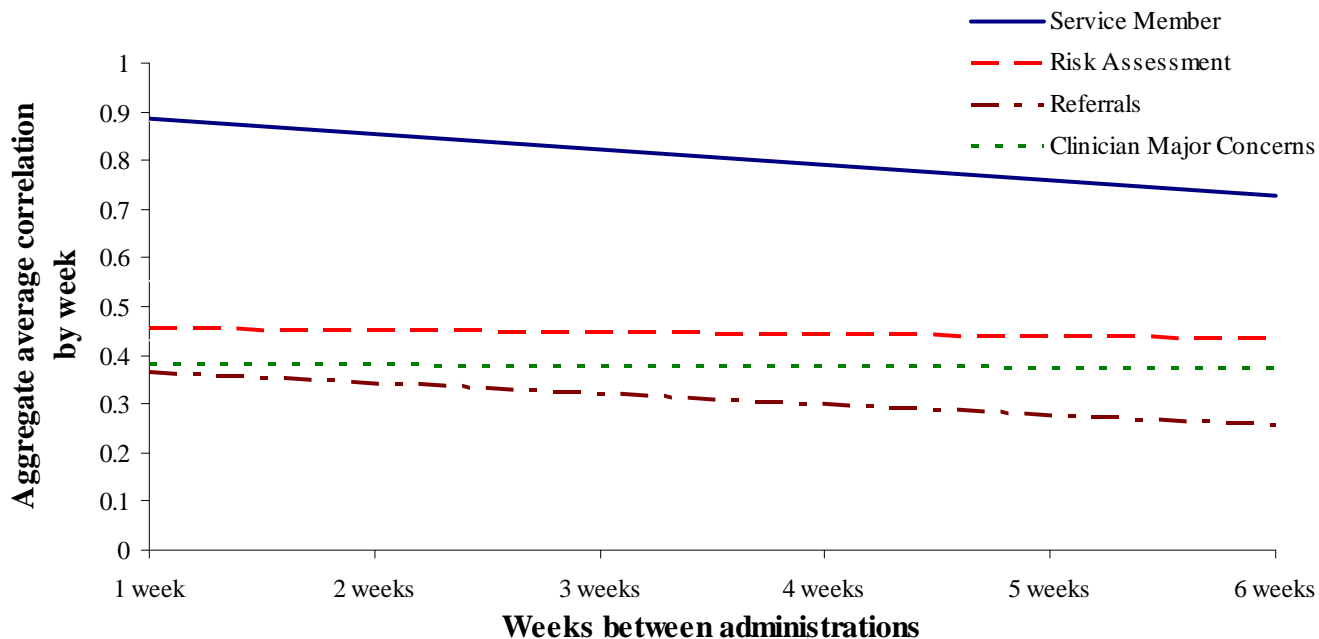
Figures 9.1 and 9.2 shows the change in the relationship between form completions over a six week period for the PDHA and PDHRA, respectively. The majority of PDHAs were completed within 6 weeks of each other (86.8%) while about half of PDHRAs (54.0%) were completed within a six week period. SMs were divided into groups according to the number of days between administrations. SMs that completed the forms between zero and seven days were categorized as “1 week,” between eight and 14 days as “2 weeks,” etc. for up to six weeks. Correlations between the first and second administration were then computed for each of the six groups. For each form, the lines on the graphs represent the line of best fit from regressions based on the average correlation of combined SM outcomes or clinician outcomes by week. Clinician outcomes are separated into risk assessment (not including the SM responses to interview questions 2 on the PDHA or question 3 on the PDHRA), major concerns, and referrals.

Viewing both figures, it can be seen that correlations among SM self-report of problems on the PDHA increase slightly but generally remain very stable across six weeks. In contrast, there is a general weakening over time in agreement for the clinician portion of the PDHA and both SM and clinician portions of the PDHRA. It is possible that some of the decline in agreement may be due to intervening health care or changes in the SMs’ current assessment of their health status. However, the finding that the aggregated average correlations within the first week are about twice as high for the SM portion (0.86 for PDHA and 0.88 for PDHRA) compared to the clinician portion (0.35 for PDHA and 0.46 for PDHRA) suggests that other factors are responsible for the low agreement between clinicians on risk assessment, major concerns, and referrals. For each of the clinician sections, the first week averages were as follows for the PDHA: 0.52 for the clinician judgment section of risk assessment, 0.23 for major concerns, and 0.29 for referrals). For the PDHRA: 0.55 for the clinician judgment section of risk assessment, 0.43 for major concerns, and 0.38 for referrals. Note that the trend lines shown on the graphs on the next page are predicted values rather than observed values. This was done in order to best represent stable, declining, or improving patterns.

**Figure 9. 1. Relationship trends\* between 1st and 2nd PDHA completions across six weeks:**



**Figure 9. 2. Relationship trends\* between 1st and 2nd PDHRA completions across six weeks.**



*\*The lines represent the best fitting line based on regression analysis. Thus, the values are modeled or fitted, not the actual data points obtained*

## ***Conclusions***

SMs are highly consistent when they complete either the PDHA or PDHRA twice within a six week period for the same deployment. On the other hand, there is considerable variability in the clinician's documentation based on the interview, despite that the SM is reporting relatively reliably. For the clinician portion of both forms, the lowest agreement between administrations of the PDHA and the PDHRA is for major concerns and referrals, with somewhat higher agreement (but still low to moderate) on the clinician judgment section of risk assessment. On average, agreement between administrations on the SM portion of both forms is double that of the clinician portions. These findings indicate that while SMs generally report similar problems and concerns on repeated administrations, the clinicians are assessing different levels of risk and showing little agreement on risk assessment, major concerns and associated referrals. Given that SMs are probably interviewing with different people across PDHA or PDHRA administrations, it is likely that a large part of the lack of agreement on the clinician portions of the forms is due to differences in how clinicians approach the health appraisal interviews and associated documentation. Ideally, one would expect that clinicians would conduct the interviews and make judgments the same way. Unreliability of the clinician, as an assessment instrument, is to be avoided.

It is also possible that SM circumstances may change between administrations—they may have received care for a previously identified problem, problems may have resolved, or new problems may have arisen. The finding that the relationship between forms decreases as time between administrations increases provides some support for this possibility, with two notable exceptions. First, for both the PDHA and PDHRA, the rate of agreement between SM self-reports completed within a week of each other was about twice as high as that for the clinician portion. Because it is unlikely that intervening health care or a change in health status has occurred within such a short period of time, this finding suggests the lack of a systematic approach to the clinical interview itself is contributing to the low agreement for the clinician portion of the forms. Second, SM responses for the PDHA remain surprisingly consistent over time compared to the decline seen over time for the PDHRA. It may be that SM perceptions of health status in the period immediately following deployment may be more consistent due to the link with a seminal event (the deployment) compared to the changes in circumstance that naturally occur as part of the reintegration process several months later (when the PDHRA is completed).

Given these findings, there is no clear case for singling out a single completion of the DD Form 2796 or 2900 as the official health appraisal of record. While either administration appears to be a relatively stable picture of SM self-reported problems and concerns, the variability in the clinician portions may be misleading to health care professionals who may be using the medical record.

## **Relationship to Other Evaluation Findings**

As also found in the present chapter, Chapter 7 showed providers to be inconsistent on a number of dimensions. First of all, there was great variety in the way that providers communicated. Secondly, while most clinicians did ask SMs the risk assessment questions, they sometimes did not ask them as worded on the form (less than half of the time). This also could result in an inconsistency in SM responses. Lastly, the clinician's attitude toward certain topics, such as the

sensitivity of the alcohol section, could influence the SM differentially. All of these examples could lead to low reliability in clinician responses over time when different clinicians were interviewing SMs.

In addition, very few active duty clinicians interviewed (chapter 10) reported receiving any kind of formal training specific to the PDHRA or feedback about their performance on screenings. The lack of training for active duty screeners may also contribute to idiosyncrasy in the clinician interviews and resulting documentation on the form.

### **Limitations and Directions for Future Research**

The results of this evaluation are limited by the reliance on secondary analysis of previously collected data. First, the number of SMs with multiple administrations of either the DD Form 2796 or 2900 was a very small percentage of the overall number of SMs, and thus may be unrepresentative of the larger sample. Second, important variables were not available for inclusion in analyses, such as clinician identification for each DD Form 2796 or 2900 completed. Based on the current findings, clinicians seem to be assessing and documenting the SMs health status differently between administrations. To better understand the sources of this lack of systematic assessment, it would be important to distinguish between multiple completions by different clinicians and multiple completions by the same clinicians. To our knowledge, clinician identification is included in PDHA and PDHRA records at the Service level (e.g., eDHA, PIMR, and MEDPROS) and could potentially be matched to the larger AFHSC datasets. In addition, more information is needed on clinician characteristics (e.g., military v. civilian, professional background, health risk appraisal training status) and the interview context (e.g., location and length of interview).

To better understand variability in responding by SMs, particularly for the PDHRA, further analyses with existing data could incorporate a more complex modeling approach that accounts for SM characteristics and actual health care utilization. Ideally, future research should also incorporate a true study of the reliability of each portion of the DD Form 2796 and 2900, using standard procedures for test-retest assessment.

## **Chapter 10: Branch, Component, and Installation Variations Influence Key Stakeholder Perceptions of PDHRA Process**

### ***Introduction***

#### **Background and Significance**

The PDHRA process takes place wherever redeployed SMs are located and train, and although the process ostensibly offers the same screening process to everyone, in fact each PDHRA event location is unique depending on the procedures and personnel involved. Furthermore, the process involves coordination among multiple individuals, including unit leadership, PDHRA program managers, and PDHRA clinicians. The entire PDHRA process and the resulting referrals and health care are therefore influenced by all of these factors. To better understand the process as a whole, Vanderbilt University (VU) researchers visited ten locations while PDHRA events were underway, and conducted telephone interviews with personnel associated with another four installations. This chapter reports on observations during those visits and on interviews conducted during the visits with key personnel involved in the PDHRA process.

#### **Objective**

Our overall goal was to understand the PDHRA process as a whole rather than relying only on data contained in the PDHRA forms themselves as is presented in several other chapters in this report. We sought to understand how key personnel involved in implementing the PDHRA process perceive their roles in the process, how the process itself occurs at each location (from identifying SMs due for the PDHRA through the tracking resulting referrals), and how implementation varies across installations.

While the site visits provided an excellent opportunity to observe the PDHRA process first hand, these observations cannot be generalized to the PDHRA process at any other locations. Our purpose on the site visits was not to make conclusions, but to learn more about variations that may occur in the process and to provide guidance for future research.

#### **Study Design and Aims**

We collected qualitative data (interviews and observations) to better understand site- and personnel-related factors that influence the PDHRA process. Observations were recorded on structured observation sheets at each site visit and later quantified to summarize observations across sites. Semi-structured interviews were conducted with individuals involved in implementing the PDHRA process at each site. Interviews were analyzed according to a priori questions about the PDHRA process and its role in military health.

### ***Methods***

#### **Choosing Site Visit Locations**

Site visit locations are shown in Table 10.1. Locations were chosen based on consultation with the PDHRA Expert Panel and with the guidance of Service-specific points of contact (POCs). Two basic criteria guided our selection. First, site visit locations had to be hosting a PDHRA

event sometime between January, 2009 and April, 2009, which we designated as our data collection period. Second, we required a minimum expected throughput of 300 SMs for Active events and 150 SMs for Reserve/National Guard events. The minimum throughput required was based on estimates of participation in our SM survey. Site visits lasted two to five days depending on the expected throughput and duration of the event. We also preferentially selected locations that ran standard PDHRA events without specialized programs not widely available elsewhere (e.g., the Soldier Wellness Assessment Pilot Program [SWAPP] at Ft Lewis). Site visits were made to all Branches and components except Air Force, Army Reserve, and Navy Reserve. Air Force Active and Reservist SMs complete the PDHRA as individuals, so there were no large group events to attend. The Navy Reserve and Air National Guard have small events that did not meet our throughput criteria.

**Table 10. 1. Site visit location, Branch, and component**

Location	Branch	Component	Expected Throughput # SMs	Actual Throughput # SMs
Camp Pendleton, CA	Marine	Active	470	481
Ft Campbell, KY	Army	Active	2800	Unconfirmed
Ft Dodge, IA	Army	National Guard	326	291
Ft Drum, NY	Army	Active	750	265
Ft Riley, KS	Army	Active	1250	912
Ft Wayne, IN	Army	National Guard	834	645
Marine Corps Air Station Miramar, CA	Marine	Active	1000	Unconfirmed
Milwaukee, WI	Marine	Reserve	115	104
Port Hueneme, CA	Navy	Active	300	156
Marine Corps Base Quantico, VA	Marine	Reserve	145	82

Because no site visits were conducted with the Air Force, telephone interviews were conducted with key personnel as described further below.

### Site Visit Procedures

While on site visits, VU researchers conducted semi-structured interviews, made observations, and administered a survey to SMs completing the PDHRA process during the visit (see Chapter 6). Site visits were conducted from January through April, 2009. Site visit teams included two to four members, depending on the duration and expected throughput. All team members completed VU IRB approved human subjects research training and three half-day training sessions specific to site visit procedures.

### ***Semi-structured Interviews***

Semi-structured interviews were conducted with the following individuals: (1) health care providers who conduct the clinician evaluation portion of the PDHRA; (2) PDHRA program managers; (3) unit leaders (NCOs and officers); (4) behavioral health consultants who speak with SMs in need during the PDHRA; and (5) case managers providing referral management services to SMs who receive referrals through the PDHRA. Because of OMB regulations, interviews were only conducted with government employees, not contractors, and not all types of personnel listed above were available at each site.

The three most common types of interviews completed were unit leaders (59), PDHRA clinicians (17) and program manager (13). At five locations, specialized interviews were conducted with case managers (1) and behavioral health consultants (8). Since a contracted agency screens essentially all Reserve and National Guard SMs, site visits to Reserve component events did not include interviews with clinicians because of their being contractors. With one exception, case managers or referral managers were not interviewed because these people were not present during the site visits. Interviews were anonymous, lasted 20-40 minutes and were conducted as individuals of interest became available during the visit. The purpose of these interviews was to understand how key individuals involved in the process perceive their respective roles and to ask their opinions about the PDHRA process. Interview guides are included in Appendices Y through CC. Interviews were audio-recorded when permission was given and transcripts were made from all interviews. Interviews with Air Force personnel were conducted by telephone since no site visits were conducted.

### ***Observations***

The VU site visit team made qualitative observations during the visit, including notes about the general procedures and events occurring during the site visit. Information about personnel roles (e.g., those who participated in pre-briefings) was obtained from site visit POCs. Observations were recorded on an Observation Sheet each researcher carried during the visit (see Appendix DD). Observation sheets were separated into six categories, with a separate observation sheet for each category: General Procedures and Flow, Educational Resources, Clinician Screening, Event Pre-briefing, Behavioral Health, and Additional Personnel.

Researchers had multiple duties (e.g., interviews, SM survey administration) during visits, so observations were made as time and opportunity allowed. The observations sheets were intended to record process notes relevant to the PDHRA and that might not be captured by the interviews.

Table 10.2 shows the Branch and component of each site and the number of observers and days of observations.

**Table 10. 2. Branch and component of each site and the number of observers and days of observations**

Location	Branch and Component	Number of Observers	Number of days Observed*
Johnston IA	Army National Guard	6	2
Milwaukee WI	Marine Reserve	3	2
Miramar CA	Marine Active	2	2
Ft Campbell KY	Army Active	8	3
Quantico VA	Marine Reserve	2	1
Ft Drum NY	Army Active	2	2
Ft Riley KS	Army Active	1	1
Ft Wayne IN	Army National Guard	2	2
Camp Pendleton CA	Marine Active	2	2
Port Hueneme CA	Navy Active	2	2

*\*This is the number of days at each site that the General Procedures and Flow observation sheet was completed. This sheet was completed more often than any other and is a good representation of the total number of days at each site when observations were recorded.*

Table 10.3 shows the total number of observations of each type across all site visits.

**Table 10. 3. Total number of each type of observation across all site visits**

	Total number of each type of observation
General procedures and flow	37
Educational resources	27
Clinician screening	26
Event pre-briefing	34
Behavioral health	17
Additional personnel	14

## Study Population

This section applies only to interview participants. Three key interviews were done at most site visit locations: Officer/ Senior NCO interviews (unit leaders), PDHRA clinicians and program manager. The term “unit leaders” includes staff officers, commanding officers and non-commissioned officers (NCOs). The term PDHRA clinician refers to licensed or certified health care providers conducting the clinician section of the DD form 2900. This individual was usually a physician’s assistant (PA) or a nurse practitioner (NP) and was in some cases a physician (MD or DO).

The term program manager refers to the individual who organizes and oversees the PDHRA program at any particular site. Program managers generally work with unit leaders to organize the completion of the PDHRA by eligible SMs within a given time frame. The job of the program manager varies depending upon the type of PDHRA event the Service component uses. At those sites that use an outside contracted agency to complete the PDHRA process, the program manager works with both the unit leadership and the contracted agency to schedule a PDHRA event.

Case manager refers to an individual who works closely with the program manager, clinicians, and individual SMs to ensure referrals are scheduled. Only one case manager was interviewed; thus, this interview is not included for analysis.

Behavioral health consultants included any individual trained to assist with behavioral health issues during the PDHRA event itself, such as SMs in distress or talking with SMs about behavioral health treatment options. Behavioral health consultants were interviewed at three of the site visits and by telephone for two of the Air Force installations.

### **Interview Procedures**

Interview guides were used to conduct all interviews (see Appendices Y through CC for interview guides). Each guide was designed to start with very broad questions, with increasingly focused questions if the desired information was not obtained (noted as *prompts* on the interview guides).

The unit leader interview guide contains three key sections of interest: perceptions of PDHRA impact on military readiness, role in PDHRA process, and knowledge related to PDHRA. Similarly the clinician interview guide is also divided into three basic sections of interest: clinician background, standard operating procedures, and training. The program manager interview guide is the most comprehensive and contains eight key sections of interest: general PDHRA background, PDHRA implementation, pre-briefing and education, command support, referrals, clinicians conducting PDHRA assessment, utilization management and reporting, and general barriers and facilitators.

### **Recruitment**

When possible, interviewees were recruited and scheduled prior to site visits, but most often they were recruited during the site visit. Site visit POCs (typically military personnel) assisted VU researchers with recruitment by identifying the relevant personnel to be interviewed and in some cases (especially for clinicians and program managers) introducing VU staff to potential interviewees. Unit leaders were typically recruited when a VU representative delivered the recruitment script for the SM survey by mentioning the opportunity for unit leaders to participate in the interview portion of VU data collection. Clinician interviews were recruited as time permitted throughout the PDHRA process. Program managers were often recruited during site visit planning teleconferences attended by site visit POCs, and completed during the site visit.

### **Analyses - Observations**

Data from all observation sheets were entered into Excel spreadsheets with descriptive information presented in text below.

### **Analyses - Interviews**

Transcripts of unit leader, program manager, and PDHRA clinician interviews were analyzed using NVivo qualitative coding software. Where interviews were not audio-recorded, interviewer notes were used. Due to the small number of interviews with case managers (only one), this interview was not analyzed for this report. Based on the number of interviews available, two qualitative coding approaches were used. All themes and coding categories were discussed as a research team with multiple reviews of data by team members to ensure reliability of results.

For program manager, PDHRA clinician, and behavioral health consultant interviews, analysis was conducted using grounded theory mapping (Clarke, 2003) and constant comparison (Charmaz, 2008). Open-ended responses were systematically categorized using *a priori* themes, with *post hoc* themes allowed to emerge from the data. Results are presented by theme using summary statements of common themes and rich quotes for descriptive purposes.

The large number of unit leader interviews was conducive to a more formal quantitative content analysis approach (Bazeley, 2003). Results are presented both quantitatively (as percentage of responses) and qualitatively (as summary statements and rich quotes).

An interview codebook (Appendix EE) was created using *a priori* categories, themes, and prompts from the interview guide. An iterative process was used to develop the codebook including (1) independent coding of selected sample calls by two raters, (2) team discussion and review, (3) codebook revision, and further testing using all three steps. Seven interview transcripts were used for testing the codebook in the development process. Once the final codebook was created, two raters coded a random selection of 20% of the total number of interviews. Percent agreement and Kappa were calculated. Average Kappa across all items was 0.64 (StdError 0.17), and across all items with Kappa greater than 0.5, the average Kappa was 0.825 (StdError 0.13). According to Landis and Koch (1977), a kappa of 0.61-0.80 should be considered to reflect substantial agreement among raters, and a score of 0.81-1.0 should be considered almost perfect agreement. The codebook was revised to delete poorly performing variables (i.e., those where gateway variables caused the disagreement or where the variable was considered redundant or ambiguous). The content analysis was then applied to all interviews by a single rater using the revised codebook.

## ***Results-Observations***

### **General Procedures and Flow**

#### ***Venue***

All but one of the events attended by the VU site visit teams were held at military facilities. The only event not held at a military location was held at a local VA hospital. The venue of the event was typically either at a hospital/clinic or a multi-purpose building. These areas were not designated strictly for PDHRA. At all except one location observers noted adequate space for the SMs to complete the PDHRA process.

#### ***Completing the DD Form 2900***

At most (6 of 10) locations, SMs completed the PDHRA process with their unit. At the remaining locations, SMs completed the process as individuals, although they may have attended with a few members of their unit. When units completed the process together, it was a scheduled event for a limited time period, typically less than one day. When they completed as individuals, they were allowed to complete the process within a broader time window, usually three to five days.

At all Active sites except one, SMs were expected to have completed the DD Form 2900 before arriving at the site. However, at two of these locations, SMs sometimes had not completed the

form ahead of time and were able to complete it using an on-site computer. At all other Active sites, SMs had completed the form ahead of time. At all Reserve and National Guard events, SMs completed the DD Form 2900 on-site as part of the PDHRA event. At locations where SMs completed the PDHRA self report section using on-site computers, it was observed that the screens were not fully blocked from the sight of others, although the screen content could not be read by those to either side.

### ***Concurrently Scheduled Activities***

Checklists were generally provided to SMs attending scheduled large events because other activities were integrated into the day. These were typically activities involved in SM readiness processing. For instance at one location, SMs also turned in equipment, received a dental screening and vaccination updates. Three of the locations visited did not provide a checklist, and at these locations the PDHRA was not integrated with other activities. These three locations were also ones where the SMs completed the process as individuals.

### **Educational Resources**

Educational resources such as pamphlets, brochures and posters were available at all of the locations except one. The content of the educational materials included informational brochures, magnets with contact numbers or helpful websites and posters with information displayed in areas open to the SMs. At most locations there were materials specific to the PDHRA and also materials related more generally to health care resources. The materials specific to the PDHRA, including pamphlets, magnets, and posters, described its purpose and included web sites and telephone numbers for further information. The resources providing information not specific to the PDHRA provided education about mental health problems (e.g., PTSD, alcohol, depression) and provided telephone numbers and web sites where SMs could seek further information or assistance (e.g., Military OneSource, [www.pdhealth.mil](http://www.pdhealth.mil)). These materials included pamphlets, brochures, posters, and in some cases business cards with contact information for specific individuals (e.g., VA contacts or chaplain). However, of locations that offered educational materials, only two locations were observed to offer an incentive or “giveaways” to encourage the SMs to take these materials and look at them. At four of the locations, observers noted SMs using these materials as a resource. (However, it should be noted that because observations were conducted only as possible given other duties, SMs may have accessed resources without being observed).

### **Clinician Screening**

#### ***Number of Clinicians***

Typically, two to five clinicians were on site to conduct PDHRA interviews. However at one location (with a large throughput), 12 clinicians were observed on hand to conduct interviews. At only one location was significant wait time (greater than 10 minutes) noted before SMs were able to participate in the PDHRA interview. This site had a large throughput, and wait times over one hour were observed. The long wait time seemed to be caused by the small number of PDHRA clinicians available relative to the large number of SMs completing the process, and also due to repeated technical problems for clinicians in loading, completing, or saving PDHRA forms.

### ***Privacy***

At all locations but two, the screening area provided for the clinician interviews was observed to be private. At the two sites not considered private, the clinicians were all in a single room and so close together that conversations were audible to all other clinicians and SMs in the room. At one of these locations, there were no physical barriers between clinicians, while at the other there were cubicle dividers separating clinicians, but they were still close enough that privacy was not maintained. A separate location also had the clinicians at tables within a single room, but the distance was great enough so that conversations could not be overheard. At all other locations, clinician interviews were conducted in the privacy of a room with a closed door or a separated cubicle. However, being overheard is only one aspect of privacy. At a minimum, the ability to see others provides information on how long the interview took place, with the possibility that longer interviews may be interpreted as indicating more problems. In one site, a conscious effort was made to preserve visual privacy by facing the chairs in which the SMs waited away from the interview cubicles so it was more difficult to tell how long an individual was interviewed.

### ***Clinician Interview Duration***

Interview length varied widely among sites from about six minutes to 23 minutes. At most sites, interview length was less than 10 minutes on average. It was noted that interview length seemed related to the number of clinicians on site, except for those sites with small throughput.

### ***Event Pre-Brief***

At three locations there was no observed pre-brief for the PDHRA event. These three locations are the same locations that also reported no other integrated activities during the PDHRA process. Pre-briefs were typically conducted by medical personnel or other staff (e.g., unit medical personnel, high-level officer or NCO, VA representative). Unit leaders were observed to participate in conducting the pre-brief at only four sites.

At all locations, observers reported an either a positive or neutral response to the pre-brief. Positive responses included active participation by SMs, such as sharing stories, answering questions posed by briefing leader, nodding heads in response to presentation. Appropriate laughter in response to the briefing was also considered a positive response. A neutral response was recorded if little or no active participation by SMs was observed, but if they still seemed to be paying attention, alert, and focused on the briefing presentation. No negative responses (e.g., hostile questions/responses to briefing leader, not at all paying attention to presentation) were observed.

The content of the pre-briefs varied by location. Of the sites that did the pre-brief, four included a story of personal experience, described the activities for the day, advocated openness and emphasized the importance of the PDHRA. Six locations mentioned the PDHRA by name, and three explained the process. Three sites used audio-visual presentations as part of the pre-brief.

### ***Behavioral Health***

At all sites where observations were conducted, a behavioral health specialist (eight sites) and/or Chaplain (four sites) were generally available as needed during the PDHRA event. At seven sites, a behavioral health screening was included as part of the PDHRA. Three of the sites required behavioral health screening for all SMs undergoing the PDHRA process.

## **Additional Personnel**

Personnel on site generally consisted of clinicians, behavioral health specialists, chaplains and program managers. At one location, a case manager also worked on site. The case manager only interacted with those SMs in need of scheduling assistance. In addition to site personnel, external observers were sometimes present (aside from the VU team).

## ***Results - Interviews***

In this section, interview findings are presented by type of interview (PDHRA program manager, clinicians, and unit leaders).

### **PDHRA Program Manager**

Thirteen program managers (PMs) were interviewed in-person or by telephone at ten of the 14 sites, with the number of interviews ranging from one to two per site (typically one). Recall that only ten site visits were conducted, but interviews were also completed by telephone with four Air Force sites.

#### ***The PDHRA Process is Affected by Event Size and Site-Specific Procedures.***

As noted in the previous section, some locations have a set facility designated for the PDHRA process while others use a traveling team that goes to a unit's available location to conduct the PDHRA. Others utilize a contracted call center to complete the PDHRA process. Some sites stage massive events or evolutions to complete the PDHRA while others are able to complete the process through walk-in availability at a fixed clinic. These site variations have a substantial influence on how the PDHRA process is implemented.

Generally the PM keeps a calendar of eligible units; however, unit leaders are responsible for the SMs' compliance in completing the PDHRA process. SMs may be notified either through an email or an announcement during formation that it is time to complete the PDHRA process. It was noted by more than one PM that the notification can be confusing because the acronyms for the various health risk appraisals are very similar (PDHA, PDHRA, PHA). SMs often think that they have already completed this process and are surprised to find out they have not.

In most Active components, the self report section was completed individually online before attending the scheduled PDHRA event/evolution. However, at one Active site, SMs met with a screener to complete the self report portion of the DD Form 2900. National Guard and Reserve components can complete the DD Form 2900 self report online as individuals or during a scheduled event using portable tablets purchased by the Services for use by the contracted agency. This portion can also be completed over the phone with a screener or customer service representative.

The clinician interview portion of the DD Form 2900 is required to be offered<sup>6</sup> to all SMs, with the exception of the Air Force. The Active and Reserve components of the Air Force only

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<sup>6</sup> In fact, SMs in any Branch can refuse to complete all but the demographic portion of the PDHRA; completing the entire form and the clinician interview are not required. However, SMs completing only the demographic portion would still be encouraged to speak with a clinician. Although statistics were not collected for this report, our points of contact in each Service Branch reported that very few SMs refuse to complete the process.

require those members with a positive screening for any item to speak to a clinician. For all Active components except Air Force, the clinician interview was completed in-person at the PDHRA event location. Air Force clinician interviews could be scheduled and conducted in-person or were conducted over the phone. For the National Guard and Reserve events/evolutions, the clinician screening may be completed by an onsite clinician or with the use of a call center that allows SMs to call in and speak to a clinician for the interview process. Referrals or Line of Duty (LOD) paperwork is generated and sent out to the individual SM's unit leader. Active duty SMs generally receive their clinician interview in a face-to-face format either during a mass event with other scheduled activities or at a PDHRA-specific event.

The number of SMs a clinician is expected to interview during a typical PDHRA event/evolution varied depending on the scheduling process of the individual facility. For example, at sites where the PDHRA was scheduled with a variety of other activities, the flow of SMs could become backed up and affect the SMs' wait time to see a clinician. Such a back-up might also affect the clinician's available time to spend with individual SMs if there was an expectation to complete the process in a limited amount of time. Among the PMs interviewed where specific guidelines were mentioned, the numbers ranged from 30 to 55 SMs per 8-hour day per clinician. However, the guidelines were flexible and based on SM need. For example, one PM stated that if a unit "had a lot of losses or saw a lot of battle, they might require a little more time."

#### ***PDHRA-Specific Education Varies Across Installations***

All installations appeared to have several forms of pre- and post-deployment briefs, typically mandated, and other education materials, such as pamphlets. However, when asked specifically about education to SMs about the PDHRA, there was less consistency in responses. One PM noted that the PDHRA is specifically mentioned in other briefs (e.g., a brief regarding combat stress and PTSD). In another case where it was mentioned that no PDHRA-specific brief was offered, the PM stated "We don't do a brief before they come in and see us. Honestly, these guys have done so many deployments, most of them." A third PM suggested that "education on how the PDHRA is actually supposed to be done" could increase effectiveness of the PDHRA in identifying SMs in need of further evaluation.

For a site that did have a specific and extensive PDHRA pre-brief, it was described as follows:

Our event starts, the unit shows up, they go into a briefing room. In that briefing room we have a counter-drug survey that's being done now, so the counter-drug people will jump up there and say, 'you know, we've got this survey.'...We have – the VA has two or three different programs. They'll have somebody jump up and tell about the different programs and tell about the process. [The contracted agency conducting the PDHRA interviews] will jump up there and tell about their part of the process. And I'll get up there and give the history and the, uh, benefits of the PDHRA program and how it works. And then they'll sit down and do the Battlemind Event. So that briefing usually takes about an hour for all of it to include the Battlemind.

#### ***PDHRA Success Depends on Command Support***

Program managers typically coordinate PDHRA events with unit leaders. For example, they will work together to schedule a time for the SMs to complete the PDHRA process. The unit leader and their subordinates are generally responsible for notifying the SMs that it is time for them to complete the self report section of the PDHRA, since they are ultimately responsible for the compliance of their unit members with the PDHRA requirement. Both the PM and the unit leader are responsible for tracking compliance and receive information regarding the number and identity of individuals who have completed the PDHRA and those who have not.

Command support was often mentioned by PMs as either the biggest general strength or weakness (or both) of the PDHRA process: “Command involvement is what makes [the PDHRA] the success that it is. And then the weakness of it is also the command involvement because commanders are focused on training, and if anybody’s got issues, you know, it’s a weakness.” In an environment of ‘constant redeployment’ and training, PMs noted that PDHRA scheduling and logistics were challenging. A PM noted that one strategy to improve the situation was to include “them rather than just make it medical, bringing the XO’s and CO’s into it more than I used to has given us a better turnout.”

It was suggested by some PMs that the value of the PDHRA process is not completely understood by unit leaders, perhaps because they feel the process interferes with valuable training time. For example, at one site the VU team witnessed two days in which SMs scheduled for PDHRA interviews simply did not show up. The PM expressed frustration, stating that there would be consequences if this same group missed a physical fitness test or a urinalysis but that there were no real consequences for missing the scheduled PDHRA. The PM later went on to state:

I think it’s just been a huge learning curve. People just haven’t – initially didn’t understand what all these surveys were and why we have to do them all, and they just didn’t like them, and then also, you know, with everything else, it’s more important for them to get qualified with their weapons... And I think we’re still not where we need to be with it being important and someone being held accountable and someone looking at why is your compliance – why do you have 350 [SMs] that haven’t done their PDHRA?

Regarding any information that unit leaders may receive about SMs who have completed the PDHRA process, most PMs mentioned that unit leaders receive a compliance report. However, there is little information shared with unit leaders on the health status of their units. The general exception is for the Reserve and National Guard components where an LOD is issued for a referral. This will go to the Commander for signature of approval before going out to the SM. In the Active duty component, no detailed information on health status is received unless the SM chooses to reveal information to the unit leader. However, if a SM is deemed to have an immediate need or if there is a concern that the member may be a danger to himself or others, unit leaders will be notified and an escort will be sent to accompany the SM to a facility for immediate treatment.

As a specific exception, one PM stated that an “After Action Report’ was provided to unit leaders that included information on “how many showed up, how many were scheduled, how

many referrals [were made], and where the referrals were to.” The PM suggested that this report would help unit leaders in knowing whether there were “mental health referrals, things like that” without naming individuals<sup>7</sup>.

### ***Referral Procedures Differ by Branch/Component***

When asked about any guidelines that may be available for making referrals as a result of the PDHRA process, PMs referred generally to the DD Form 2900 itself. For example, several mentioned that clinicians determined whether a referral was needed based on any SM symptoms that were documented on the form or revealed within the interview. Also mentioned were the PDHRA-specific algorithms for TBI, PTSD, and alcohol use that are used to determine whether a SM receives a referral.

It was noted that SMs were typically referred to primary care providers first, who then evaluate the SM’s symptoms and determine whether to refer on to a specialist for follow-up care. At one site, when discussing referrals for mental health concerns, the PM stated that “we definitely have outsourced entities when the [SMs] themselves are not comfortable having any type of documentation about it.” Most site PMs confirmed that SMs could be referred to non-documented services such as Military OneSource or chaplains. Two PMs also mentioned that SMs utilize a free, non-documented resource called FOCUS or the FOCUS Project. As stated on the FOCUS Project web site (2009), the FOCUS Project (Families OverComing Under Stress) is a resiliency-building program designed for military families and children facing the multiple challenges of combat operational stress during wartime.” One PM felt that a general strength of the PDHRA was that it increased SMs’ access to healthcare particularly because of the focus on alcohol use and mental health problems: “If it’s a mental health issue, then, yeah, I think [SMs] can get in the system pretty easier because there’s more privacy involved when it comes to PDHRAs.”

For active duty SMs who received a referral, assistance with appointment scheduling was varied, although some form usually occurred. For example at some sites, a referral may be entered electronically and the SM will then be contacted to schedule an appointment. SMs may also turn out for sick call for immediate needs. It was less clear how completion of referrals was tracked and whether the individual SM was contacted at any point to verify follow-up treatment.

This process is very different for the National Guard and Reserve components. If they are not on active duty, they generally look to the VA for care and services, although they may also have access to TRICARE or services arranged through their own private health insurance. The SM must schedule his/her own appointment with the VA and is asked to bring in a copy of the LOD generated by the provider or a DD 214 if s/he is separated from active duty. Although the VA had representatives present at several site visits, often these individuals did not have the capability to schedule appointments at that time. However, at one site, SMs could take a copy of their LOD/referral paperwork directly to a VA representative during the PDHRA event, and begin scheduling necessary appointments. This particular site also keeps a “referral log”. Using

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<sup>7</sup> VU recognizes that HIPAA and other privacy regulations limit the type and amount of information that could be shared without the SM’s permission. However, there are aggregate comparative data that might be seen useful by commanders that could be shared.

the completed DD Form 2900s and the LODs that come back to the command from the contracted agency, a case manager contacts the SMs on this list if they have not arranged for paid orders within a 6 month period. (With an LOD in place, SMs are considered to be ‘under orders’ and are paid for their time to complete evaluation and treatment). Another site had the capacity for clinicians to enter referrals to the VA directly into an online system. A case manager then contacted SMs to help them arrange appointment times and verify their needs.

Further differences were noted at AF installations, where the PM (or their administrative staff) was in charge of identifying SMs needing referrals as indicated by any positive responses on the DD Form 2900. These SMs were followed up with a phone call to determine if the symptoms persist or have worsened, and then a clinician interview is set up with the SM to determine whether a referral is warranted. As one PM stated:

Well, the process really starts and ends here as far as that [referral process] goes, with me. When I make a referral, I let the person know why, or sometimes it’s per their request, and I give them all of the contact information, the phone numbers. And if I go through consult management and put an actual consult in on the computer system I, uh, make sure that the member has the phone number and/or walk the member down to the consult management office and put them in contact with the people who let the member know these are the people that will be calling you in just a few days.

***Additional PDHRA Event Personnel and Services Offer Supplementary Support to SMs***

In addition to the assistance of referral or case managers, as mentioned above, some sites had additional personnel or unique relationships with referral organizations (e.g., the VA) worth noting.

At one site that had behavioral health specialists included as part of the PDHRA process, the PM commented that sometimes SMs “have a lot of issues that they identify but they didn’t want to see mental health or didn’t want to see anybody.” These SMs are directed to the behavioral health specialist as simply the next step in the PDHRA process. Although the meeting with the behavioral health specialist is optional, the PM noted that instead of asking “Would you like to?...Now we are just kind of like, if you have a few more minutes let’s go over.”

For National Guard and Reserve sites, typically representatives from the VA, VET center and Military OneSource were also invited to participate in the PDHRA event. At one site where the PDHRA was held at the local VA, the PM stated:

Recently we’ve started doing them at the VA so that’s worked a lot better... the VA, you know, they’re one of the biggest players as far as getting the [SMs] their care and getting them plugged into resources, and, uh, this saves them from a lot of doing a lot of double entry on the computer. It’s just us. If a [SM] is already in the system, they can pull them up on the spot. The [SMs] are at the VA, they know where they need to go for their appointments, and they’re not as – you know, they don’t have to figure out where to go. It’s just kinda more of a comfort

thing for the [SMs]. They've already been there, they've already talked to the VA, so it's just going back to the same location.

The idea behind holding this event at the VA seems two fold, first to have an adequate place to conduct the PDHRA on a regular basis, but beyond that it allows the SM to learn where the VA is and perhaps to gain greater familiarity with the facility and possibly the staff. The goal seems to be to put the SM at ease with the idea of going to the VA for potential follow-up care.

***Specific PDHRA Training and Feedback Occur Informally if at All***

The PMs reported limited participation in the selection of the clinicians who are hired through civilian government contract companies or are military providers assigned to this duty. Contracted clinicians at active duty sites are typically credentialed through the military treatment facility (MTF). The 'fit' of the clinicians with their role and responsibilities was important to the PMs. At several sites, the clinicians were seen as their biggest strength: "the biggest benefit of anything is the passion that the providers have for what they are doing." In contrast, at one site, a PM raised concerns that they did not have a role in the hiring process to ensure that contracted clinicians have "the skill set that we need." Further, year-to-year contracts were seen as a potential barrier to hiring and retaining qualified clinicians. PMs generally preferred clinicians who had military experience or at least exposure to the military through family members, etc.

Clinician training specific to the PDHRA process on the Active side appeared to be limited to shadowing current clinicians as a form of the 'see-do-train' cycle consistent with hands on medical training. As one PM stated, the DD Form 2900 is "pretty self-explanatory if you've gone through it...And the [computer] system...if you don't answer a question it won't accept it. You can't save it."

Specialized training on identifying signs and symptoms for physical and mental health problems related to combat experience was limited. At one site that also had psychologists on staff, the PM reported that clinicians work closely with mental health staff. In addition, clinicians had training on the symptoms of PTSD. Regarding any training on making referrals, the algorithms for TBI and alcohol that are built into the PDHRA were mentioned. However, the general sense seemed to be that clinicians made referrals as they saw fit based on their professional background and experience. In a site where behavioral health specialists were also available, it was mentioned that SMs would be sent to the 'psych tech' to determine whether or not a referral was warranted.

Feedback to clinicians screening active duty SMs was not routinely provided. When it occurred, it was typically through an internal peer review process. A specific example was given that illuminates one site's peer review process:

If...somebody...committed suicide or something like that, we'll pull that person's PDHRA and see – one, if they did it, or two, if we screened them, if something was missed or something along those lines. So we have to do an internal peer review, but there isn't anything huge done. We're the type of clinic that if anybody has a question or they feel a little uneasy answering some of the [PDHRA] questions, they'll stop the interview and go ask another provider. So

there's a lot of internal feedback in kind of that reviewing of each other's work just to see what other opinions are.

### **PDHRA Clinicians Screening Active Duty SMs**

The VU team interviewed 17 clinicians either on site or by telephone for nine active duty installations. The number of clinicians interviewed ranged from one to four. As with the program manager interviews, there were several substantial differences as to how the clinicians responded to the interview questions based on procedures, structures, and resources available that were unique to specific installations.

### ***PDHRA Purpose Consistent With Screening for Ongoing Problems***

When asked their general goals for conducting a PDHRA interview, all clinicians mentioned that the primary purpose was to identify and address SM concerns and get them the help that they need. As one clinician stated, the interview is seen as a "sweeper visit." Specific areas mentioned included ensuring SMs were not a threat to themselves or others; making sure all symptoms or ailments had been addressed and were not ongoing; giving SMs the "opportunity to get second opinions as needed"; and ensuring that no SMs "fall through the cracks if they need something." Several clinicians saw their goal more broadly as improving the lives of the SMs seen. It should be noted that two clinicians (at separate installations) seemed unclear whether they could actually see the PDHRA during the interview (e.g., one stated it was the PDHA, the other stated not knowing how SMs answered the questions because there was no access to the form). One clinician suggested that the time window for conducting PDHRA interviews should be less than six months after post-deployment.

And the more important thing, I think, is still the closer to the trauma that you can address the issues, the better off we're going to be. It's bad for the rust spot. If you wait six months, it's a bigger rust spot. I don't care what it is, you've got to address this thing before it becomes a problem. We're nipping at the bud of something that should have been nipped at long ago.

Three clinicians spontaneously mentioned that an important goal of the PDHRA was to educate SMs, as well as "the people around [the SM]" to help foster sensitivity to SM difficulties. Such education was viewed as relevant not only to current symptoms but potentially to future problems as well. As stated by one clinician:

If a [SM] has had symptoms in the past, does it make him more resilient or does it make him more susceptible? So, you know, try to give them not only the information that they need as far as seeking support of service if they need it now, but also preparing them for a future deployment.

Only one clinician expressed any concern about the content of the PDHRA interview. This clinician seemed uncomfortable with the behavioral risk assessment questions, stating:

Okay, and then see here the form goes right into – from the provider's perspective the behavioral risk: 'The past month you've been bothered by thoughts you'd be better off dead?' ...But it's like – I think it's a rather strange place for it. I don't

know – it’s like, you know, we could take – I can’t fix this. Is this an appointment? But it just is weird to go right into it...”

***Preparation and Guidance for Interviews at Typical Installations Based on SM Self-report and Other Available Information***

Very few of the clinicians knew the SMs previously, with the exception of one installation where unit providers were also conducting the PDHRA. At that installation, a clinician noted that the identification of new medical or mental health issues was very rare, but that the PDHRA was still seen as valuable as an added measure to ensure each SM was adequately assessed. Further, for these clinicians, prior knowledge of the SMs and their level of combat involvement were viewed as important background information for a full assessment. If time allowed, clinicians mentioned reviewing electronic medical records and the “screener that they filled out.” However, it was not clear whether this happened only when SMs were seen at the clinicians’ offices or at the PDHRA event. When asked if any kind of information would be desired, one clinician suggested “I wish there was information about their deployment. That would save time in terms of having to ask them. Like for how long their deployment was, when they returned, and what their primary job is.”

Because of the typical format of a PDHRA event at all other installations, where SMs did not have appointments to see clinicians, but rather waited to see the next available clinician, there was little preparation that could be done prior to the interview. Several clinicians noted that no other information, aside from that available on the PDHRA self-report and the built-in alerts (e.g., for alcohol use problems), was needed to prepare for the interview. However, clinicians separately noted that “your perceptive skills have to be enhanced to some extent. Your desire to find problems, if any exist, needs to be increased...the quality of the question, probably, is most important.” In addition to walking through the form and looking for positive responses to guide the interview, some clinicians said they also pay close attention to SM eye contact, sincerity, and expressions to help guide the interview. One clinician suggested that the PDHRA process could be improved if there were easier access to PDHA results and electronic medical record systems.

There was very little formal training specific to the PDHRA that was reported. While one clinician mentioned participating in a tele-training about the revised DD Form 2900, the majority of clinicians stated they learned through the see-do-teach model. Others mentioned tutorials or handouts on the PDHRA. None judged this as inadequate; however, some clinicians reported going online during the off duty time to look up information on various websites (e.g., [www.pdhealth.mil](http://www.pdhealth.mil), Battlemind training). One clinician commented, “It’s pretty straightforward...the hardest thing about it as a clinician you tend to, uh, go into more detail, and with the screeners you really have to limit how much time you spend [be]cause the screening is not a full evaluation.”

***Congruence Between the Self-report and the Interview: Differences due to SM Error, Previous Treatment, or Non-disclosure***

All clinicians stated that they reviewed the SM self-report for positive responses to any questions, which were then discussed to verify if the problem was current and still considered a problem. For example, if symptoms had been addressed through treatment, one clinician stated they would “document that [the SM] had been seen for it. There’s not some outstanding problem

that has not been addressed.” Alternately, if the symptoms had resolved, the clinician would note this on the form, “for instance, [the SM] was feeling these feelings for the first week and then, you know, now asymptomatic.”

Only one clinician mentioned a possible pattern of over-reporting of symptoms that was influenced by the age of the SM. This clinician suggested that older SMs would report fewer symptoms because younger SMs are “just in for one tour,” and “are more concerned about getting out and getting VA benefits than the older guys are.” This clinician later stated that having a military background may help in recognizing over-reporting of symptoms.

Another clinician noted looking for any unusual patterns in responses as well, such as if “every answer is negative.” When differences were observed between SM responses on the DD Form 2900 and the interview, three clinicians noted that SMs could make “careless mistakes when rushing” to fill out the form. Such errors could be caused by being in a hurry and mismarking an item, or because the computerized form is difficult to work with. As stated by one clinician about the self-report section:

I mean, it’s a short – for the questions they’re asking and the data that they’re trying to draw, it’s relatively a short survey with a lot of great guidance. And the questions are – the wording’s a little bit hard to understand sometimes, and the [SMs] are almost invariably trying to quickly go through it.

However, all clinicians suggested that SMs may not disclose problems purposefully in order to avoid identifying themselves. Responses varied when clinicians were asked to estimate how many SMs were not forthcoming or truthful on the form. Three clinicians (at two separate installations) estimated a third of SMs do not fully disclose problems. Clinicians at two other installations felt that non-disclosure was “infrequent.” One clinician felt that SMs were less likely to be forthcoming about problems during the interview as opposed to the self-report. Most clinicians mentioned that SMs were more likely to report physical problems, perhaps because they had already been addressed and treated, but less forthcoming about mental health or alcohol issues.

***Concern About Military Career and Need for Command Support Seen as Related to SM Non-disclosure***

Not trusting the system, high military rank, fear that their military career will be negatively affected, not knowing what services are available, and stigma were mentioned as reasons SMs may not fully disclose on the self-report section or in the interview. As one clinician stated, the SMs “just don’t want to appear broken.” All clinicians commented that they felt that SMs were concerned about how their reported symptoms would affect their military career. Two examples:

It can affect somebody’s record, and if they want to climb in the military, they certainly don’t want to have evidence of potential alcohol problems. So, you know, so there’s ways, reasons, to lie.

A lot of these people are taught not to think, okay? For various and sundry reasons, their future in the military may depend on what they complain about. They can cut their own throats in terms of a military career.

A clinician suggested that SM perceptions that military careers may be negatively affected were influenced by competing demands within the chain of command:

While the DoD wants to ensure all concerns or injuries are addressed and ironed out...This is juxtaposed to the military's impression that 'I'm not going to get that promotion unless 85% of my soldiers are on that plane. So I don't care if you just hit your head on the sink and you're dizzy and your head hurts and you feel like you can – get on the plane.' That dramatic sometimes. In which case the brigade surgeon or the commander overrides every medical opinion we've got. They can do it, and they will do it, and they have done it. Not all, but some.

In contrast, another clinician suggested that explicit unit leadership support of the PDHRA process and relating self-experiences of how they may have experienced problems could be very influential in increasing SM self-disclosure:

When we get the support of the chain of command, when I can have a [unit leader] stand up and say, 'Look, I was in the trenches with you guys. I know you guys...I've been to behavioral health...and I'm a better man for it.' Chain of command is huge with these guys.

### ***Clinician Responses to Perceived SM Non-disclosure Dependent on Rapport and Other Strategies***

Clinicians at two separate installations indicated that their ability to establish a rapport during the interview facilitated SM disclosure. At the one installation where unit providers were involved in the PDHRA process, clinicians felt that knowing the SM prior to the event was important. Another factor that was mentioned as important to eliciting information during the interview was clinician experience, particularly military background, which could serve to establish a 'commonality' with the SM.

One clinician reported using a strategy of informing SMs of the consequences of non-disclosure when it was felt that they were not being truthful:

If you don't tell me the truth, and it gets out, then that's falsification of a – of a record, and that could make you chapterable. And it's a possibility you can go to a court martial because you are government property. You have a responsibility to maintain yourself in the highest standard of fitness.

Another clinician mentioned using the referral process itself as a way to facilitate treatment for a different problem in hopes that it would help to encourage a reluctant SM to seek help:

They're kind of reaching out for help, but they just don't want to put it in writing anywhere. And those are hard particularly because I want to – I want to try to

establish a connection with them and get my foot in the door. I don't want us to say, 'no, you've got this issue. You need treatment.' The bottom line so I may try treating their – I may call it insomnia initially instead of PTSD and try to get my foot in the door that way and start some sort of treatment.

***Variation in Documentation of Response Clarification on the DD Form 2900***

Given that SM responses during the interview may differ from their previous answers on the self-report (e.g., new concerns or previously reporting problems no longer a concern or addressed through treatment), VU asked clinicians how they document such modifications. There appeared to be no routine or standard approach amongst clinicians or even within a single clinician. Sometimes open-ended comments were entered in a general comments section; other times the first question in the clinician documentation portion of the PDHRA was marked *screening results modified, amended, clarified during interview* and comments were entered into the accompanying field.

***Installation-specific Factors Influence PDHRA Referral Process***

At two installations with large numbers of SMs going through the PDHRA process, common themes included concerns about the limited number of providers available for referral, and issues that affected differences in how the appropriateness of PDHRA referrals was viewed by MTF or other referral sources.

The limited availability of referral providers was seen as creating additional steps for the SMs to go through for a referral, such as having to see a non-PDHRA provider before being referred. As one clinician stated, a problem with the referral process included the “roundabout referring to primary care” so that the SM is “seeing the same provider that did nothing for them the first time.” Some clinician comments also indicated a lack of agreement between those involved in the PDHRA process and installation providers. As one clinician stated “I try to circumvent their administration, their authority” by referring SMs to a sub-specialty “so they don't keep bumping their heads against the same ceiling.” As a related concern, clinicians suggested that their referrals were often seen as inappropriate because of the limited time for the PDHRA interview:

Some providers don't think the referrals from the event are accurate enough so they won't take them and [the SM] has to go see another provider; which... is annoying because I may know what the issue is and I – they may think it's inappropriate for me to put the referrals right into them. Like I said, I think I've fixed that now.

At the installation where the PDHRA process was conducted by unit providers, the referral process worked very differently. These clinicians commented that few referrals were made through the PDHRA itself, either because physical concerns had already been addressed or because SMs would be re-assessed at their individual offices. For new concerns, particularly mental health issues, the clinicians would schedule formal appointments with themselves at the installation medical facility. Any further referrals would be made as deemed necessary after that visit.

The review process also occurred very differently for the Air Force Active because only SMs with positive responses were screened as per procedure. Typically, these positive PDHRAs would be reviewed first by medical personnel or a psychologist, who would then pass the case on to a clinician if there were concerns. In some cases the person doing the initial review was also the clinician who would complete the PDHRA with the SM. Referrals may be marked on the electronic copy of the form or directly entered into a separate computerized system (and not documented on the PDHRA). Several of the clinicians recommended that face-to-face interviews with all SMs would be optimal, but that there were not enough resources. Most felt that SMs disclosed truthfully on the PDHRA, although it was mentioned that “people have kind of figured out what happens based on how you fill out the form, and I think there are very, very many negative responses.”

***Limited Interview Time and the Impersonal Climate of a Typical PDHRA Event Seen to Affect Both Clinicians and SMs***

All clinicians, regardless of installation, had concerns about the effect that the brief time available for interviews had on both the SMs and the clinicians themselves. Although dedicated to their jobs, clinicians expressed concerns about being able to be effective in the time they were allotted to process each SM. Clinicians at different installations estimated processing anywhere from 50 to 90 SMs per eight-hour day. As one clinician stated who had conducted PDHRAs in various settings:

You know the clinicians have literally 7-12 minutes. I worked in an environment like that where I started off, the visit was we only have 12-15 minutes. We have none of that [time limitation], which is huge at establishing a working, trusting, clinician/patient environment, which is what you need, uh, particularly if people are a little bit, um scared to disclose any problems. And you’ve got to have a clinician that actually cares.

It was mentioned that SMs had complained about feeling rushed or feeling like they “just want to get out of [the interview]” because of the time spent waiting. A major concern was the lack of time to establish a meaningful rapport with the SMs to “extract useful information that will help them either heal or recover.” Regardless, all clinicians reported that if a SM needed more time for an interview, that time would be given.

Some clinicians admitted to feeling burned out, stressed by the pace of interviews and the pressure to meet expectations for the number of SMs to be processed in a day. All of these were reasons given for staff turnover, which decreased general efficiency. Some suggested that the addition of more staff would benefit all by keeping the pace at “a more steady state.” It was also suggested that educating Commanders to “try to get them to buy in that it’s better to have a little bit more time with the guys and spread it out over a longer period of time” would also improve the quality of services provided. Suggestions to improve efficiency included increasing the permanency of positions and hiring clinicians with a military background because it would aid their ability to understand SM problems.

As a related issue, some clinicians mentioned that having distinct PDHRA events outside the typical ‘office visit’ led to potential problems in the screening process. Clinicians at two separate

installations had had experience conducting the PDHRA as part of events and through office visits where SMs were scheduled for appointments. While it was acknowledged that the latter procedure often resulted in long delays getting an appointment, it was viewed as preferable because the SM was able to have as much time as needed to ensure all problems were addressed. In addition, the privacy of the office setting and the ability to review self-reports prior to meeting with an SM (because they had specific appointments) were both seen as benefits.

The separateness of the PDHRA process from normal medical care structures was also suggested as a cause of staff turnover. As stated by one clinician:

We lost some of the good people because we didn't take care of their clinical needs. Didn't send them out. When we're slow, you need to go to a clinic and keep your clinical skills up...They need to feel like they're still good at what they do, not just – 'cause this will get you in a rut.

### **Behavioral Health Consultants**

Eight Behavioral Health (BH) consultants were interviewed from five active duty installations. Many of their responses were similar to those presented in the PDHRA clinician section above (e.g., influence of stigma on SM disclosure, general aspects of the PDHRA process). Therefore, this section will focus only on unique themes that arose from the interviews.

Further, it should be noted that the roles of BH consultants varied by installation or Branch. Typically, encounters were by telephone for Air Force BH consultants, while they were in-person for other Branches. BH consultants may be seen by all SMs undergoing the PDHRA process or only those who had positive responses to behavioral health or alcohol use questions in the self-report section or where the PDHRA clinician otherwise had a concern. The process was set up where the BH consultant was 'simply another provider' to be seen, or the SM was asked if they wanted to speak to a BH consultant. While all of these issues are important to consider, we are unable to provide results specific to the process because too few BH consultants were interviewed to adequately protect individual confidentiality.

#### ***BH Consultants use Varied Strategies to Encourage SM Disclosure and Acceptance of Referral***

BH consultants raised many of the same issues as did the PDHRA clinicians related to concerns about lack of disclosure about behavioral health or alcohol problems and the influence of stigma on SMs. For example, many emphasized the value of normalizing combat stress reactions and the importance of command support in decreasing the stigma attached to mental health problems. Additional issues raised specifically by BH consultants included the value of increasing awareness of symptoms, use of the PDHRA to document concerns for later health claims, and the provision of educational resources.

One BH consultant stated that while it was felt that the SMs were typically honest, they may be unaware that they are experiencing a behavioral health problem. Thus, an important aspect of reviewing the PDHRA together is to ensure that all questions are reviewed and fully understood by the SM, regardless of whether positive or negative responses were recorded. Another BH consultant mentioned the importance of ensuring the SM has 'some sort of plan' at the

conclusion of the screening. “Even if they say that they’re absolutely fine, we still give them handouts, resources flyers, so that they have it in their back pocket if they need it.” As stated by another BH consultant, a goal of the interaction is to de-stigmatize the use of mental health care:

One of the things that I do personally is every time a new person comes through the door, I always ask the question, ‘Where did you find the courage to come in?’ in an effort to lift them back up, because I think it’s remarkable that given this very tough culture of suck it up and push through and don’t be a wimp and all of that, that people do show up.

Several BH consultants mentioned that they used their interactions with SMs to encourage them to view the PDHRA as a vehicle to document concerns for later health claims if necessary. Whether through presentations or as part of the individual interaction, as one BH consultant stated, “We need to get it on record somewhere so that if twenty years from now they’re having problems, that they’re able to go back and say, ‘See this was an issue.’ And they can get services.”

***Suggestions for Improvement Include BH Interviews as Typical PDHRA Process, Revision of the Alcohol-use Algorithm, and PDHRA-specific Training***

Several of the BH consultants mentioned that in an ‘ideal’ world face-to-face interviews with a BH consultant would occur as a standard part of the PDHRA process. Some stated this would be useful only for those with ‘positive screens’, while others suggested it for all SMs. As stated by one BH consultant:

I would provide some kind of a format for everyone who returns from deployment to get some care. Everyone. And that way you tend to take away a lot of the stigma. Okay? [The process as is]...it’s still targeting people who are ill, and, you know, the other way around that is to just make it for everyone so it’s just kind of normal. And I know that the DoD has a huge problem. None of us were expecting such an enduring conflict, and, but we know a lot more than we did in the Vietnam era, and the challenge is to do it differently, and we haven’t yet done it differently. We’re doing it better than we did, but it’s not different. It’s still the same. And so my dream would be that we figure out another way to do this, which would necessitate lots and lots of providers to work in another way, and maybe we could work in concert with command so that it’s just another part of training and readiness. But no one’s talked about that yet.

Another area of improvement to the PDHRA process suggested by several BH consultants was more PDHRA-specific training. While all had received some sort of training on the PDHRA (similar to what was reported above for PDHRA clinicians), more information on “how the program came about, and the various changes and why some of the changes were made” was considered helpful. Another BH consultant suggested some “kind of provider training where you commiserate with other providers, talk about some things in there that could be done better or worse or things like that.”

Finally, two BH consultants mentioned that the alcohol-use algorithm may be too sensitive. As stated by one BH consultant:

They're trying to define it by the amount of drinks when I think most people in substance abuse treatment would think you need to define it by its function. Is it causing your liver to blow a gasket? Did your wife leave you because of that? Can you not perform your job? Have you had legal consequences? It just seems like philosophically they're trying to define it by amount when I'd say actually some people drink a large amount, but they don't have any of this other stuff, and I don't know if they consider them to be a substance abuse problem.

### **Unit leaders**

A total of 59 unit leaders were interviewed, either in-person or by telephone, from 12 of the 14 installations. Of the 56 where unit leader rank was reported, 64% were non-commissioned officers (NCOs) and 36% were officers.

Note that the percentages and Ns presented below represent the number of total responses captured for each question, which does not necessarily equal the number of unit leaders interviewed. For example, not all unit leaders responded (either at all or in a way that could be coded) to each question; thus, the number of responses could be less than the number of unit leaders. Similarly, in some cases unit leaders gave multiple responses for the same question (e.g., both positive and negative opinion about how the PDHRA influences military readiness). Thus, the number of responses may be greater than the number of unit leaders interviewed. For each interview question or theme discussed below, the number of responses captured is presented in the section heading.

#### ***Positive Perceptions of PDHRA Impact on SM Military Readiness, Small Influence on Identification of SMs With Problems***

There were four interview questions related to identification of SM problems and military readiness.

*How unit leaders typically identify SMs with physical or mental health problems (n=89).* The majority (71%) of responses indicated that unit leaders were alerted through the chain of command or more typically, found out about the problem through observing the SM's behavior or appearance, learning about a specific incident (e.g., a fight or DUI) that indicated a problem, or the SM directly communicated that s/he was having a problem. Unit leaders often noted differences in how physical health problems were identified compared to mental health problems. For example, one unit leader stated that physical health problems were usually directly communicated, but found observation of behavior more likely for mental health problems, "They try to stay away from the platoon. They don't want to hang out with anybody. You can just pick up the change in behavior on them."

It was much less common that unit leaders would be approached by someone other than the SM or the chain of command, such as a unit or family member (10%). Similarly, few indicated a

formal process or protocol in place (e.g., morning roll call) through which unit leaders may be made aware of SM problems (9%).

*How PDHRA has influenced ability to make those identifications (n=57).* Further, the majority (61%) of responses suggested that unit leaders did not find that the PDHRA had influenced their ability to identify SMs experiencing physical or mental health problems.

Among cases when unit leaders who found the PDHRA helpful in identifying SMs with problems (33%), it was often suggested that it was simply the process of going through the PDHRA together or PDHRA-related education that helped open up communication around problems that SMs were experiencing. Other unit leaders reported that the questions themselves (on the self-report section of the PDHRA) had helped them to understand better what kinds of problems they or their SMs may face. Very few mentioned that it increased their understanding of SM problems by receiving specific information on rates of problems experienced by SMs in their units (e.g., aggregated reports of PDHRA results).

The three responses where unit leaders had reported that the PDHRA hinders identification of SMs with problems were varied. One unit leader associated with a Reserve component unit expressed concern that referrals occurred too late in the process, “after [the PDHRA] I have a stack of referrals and the [SMs] are pushed back into their life and not enough time is taken to identify problems before they’re deactivated.” The other two unit leaders both reported feeling that the PDHRA was too sensitive, and over-identified problems. Interestingly, both of these leaders stated that they themselves had been identified as having problems from the PDHRA but that they did not feel their problems were of concern. For example, as stated by one unit leader:

It [has] identified me on each of my last four deployments. And I have not been in harm’s way at all. I mean, the basic question is, you know, during your deployment do you have any stress? Of course, I have stress...It’s not unhealthy stress. It’s just stress. It doesn’t make any delineation between healthy and unhealthy stress. It’s just stress, period.

*How PDHRA has influenced the military readiness of your unit (n=60).* In contrast, the majority of responses to this question (68%) indicated that unit leaders felt that the PDHRA positively affected the military readiness of their units. Typically, this meant that the PDHRA increased the Commander’s ability to know what was needed about troops’ health in order to ensure readiness or that it increased troops’ access to care, which was seen as improving readiness to deploy. Often, unit leaders stated that the PDHRA had simply raised their own or the SM’s awareness of potential problems, similar to the results above with regard to general identification of problems.

When unit leaders responded that there had been no influence on military readiness (27%) there were a variety of reasons, including no access to findings from the PDHRA, feeling that SMs can access care without the PDHRA, to several mentioning that SMs will not be forthcoming on the PDHRA. A few unit leaders commented that the PDHRA would not influence military readiness because either SMs were “already filed fully medically ready,” or that “a lot of guys had medical issues pushed to the side just so that we can get the right amount of people to go overseas.” Other less frequent responses included being new to the process or a concern that the PDHRA did not

distinguish between deployment-related and non-deployment-related problems. The negative responses were consistent with those above, in terms of the PDHRA being overly sensitive. One response provides an example of both a positive and negative view of how the PDHRA influences military readiness: “In my opinion it has helped it by letting them know that there is help or health care out there for them, but it has hindered it due to the lag that it takes.”

*PDHRA effect on SM time away from duties (n=56).* Over half (55%) of responses indicated that unit leaders did not feel that the PDHRA took time away from duties. Note that this often meant that the PDHRA and associated activities were considered duties themselves. However, the other 45% of responses suggested that many do feel that the PDHRA decreases SM availability for duty. There were equivalent numbers of responses related to concerns about the time for the PDHRA process itself (21%) or referring to the time taken for follow-up appointments or treatment as a result of PDHRA referrals (23%). However, it should be noted that although it may have been expressed that availability for duty may have been negatively impacted, unit leaders often stated that it was “for a good reason.”

#### ***Commander Role in PDHRA Process Primarily Related to SM Compliance***

Seven interview questions were specifically relevant to unit leaders’ role(s) in the PDHRA process.

*How do you know when SMs in your unit become eligible for PDHRA? (n=52).* The majority of responses indicated that there was some formal mechanism in place to inform unit leaders when unit members became eligible for the PDHRA. Typically this was an alert received from someone such as higher command or medical personnel (79%); less often, the unit leader checked SM records him- or herself (6%).

Interestingly, 15% of responses indicated that unit leaders were unaware of the process. It seemed that although some were involved in ensuring compliance, they were not involved earlier in the process. As one unit leader stated, “I’m not seeing that list of when they become eligible for it. I’ll see the list if they’re not getting it done. That’s when they kind of start cluing me in on that.”

*How involved are you in ensuring SM compliance with PDHRA? (n=54).* Most responses indicated that unit leaders (81%) were involved in ensuring SM compliance with completing the PDHRA process. Of the remaining responses where a unit leader had indicated they were not involved, this was typically because someone else within the chain of command held that responsibility.

*What are biggest challenges getting SMs to complete the PDHRA? (n=54).* The most common challenge in getting SMs to complete the PDHRA concerned limited time or resources (37%). One unit leader stated “When you’ve got 800 people trying to get the same thing done in a week...It’s just a logistical battle.” The most common issues were scheduling conflicts, and the time it takes to complete the PDHRA. There were few reasons related to the SM (13%), such as lack of motivation or not having the self-report portion completed prior to the PDHRA interview. According to one unit leader, SMs see it as “just...another piece of paperwork.” A number of responses (22%) indicated that unit leaders felt the challenge lay in other areas, such as getting

SMs to complete appointments that resulted from PDHRA referrals, it being “just another survey,” or rapid cycling deployments. One unit leader suggested that the emphasis should be on the chain of command, not the SMs:

The military answer is there are no challenges because we just tell them. The reality is that until –until they convince senior commanders that this really is important and that they need to make it a priority, that without command emphasis, you’re not going to guarantee [SMs will attend scheduled events]. So command emphasis I think is, uh, important, and it has to start at the top, not at the company or platoon level. The platoon leaders and company commanders may want to see their soldiers get the PDHRA, but there may be other conflicting missions that they have to prioritize, and they know they’re not going to get chewed out for missing a PDHRA.

Interestingly, about a quarter (28%) of responses indicated that unit leaders felt there were no challenges getting SMs to complete the PDHRA. However, several provided qualified answers. For example, “We just tell them to do it, and they do it. The validity of their responses, who knows?”

*Do you receive information on your unit members' PDHRA results? (n=62).* About half (53%) of responses indicated that unit leaders stated they did not receive information on SMs' PDHRA results (e.g., referrals, etc.). Most unit leaders qualified these statements by saying that information was confidential or “between providers,” although they may get information on individual SMs who miss or become overdue for appointments. About a third (35%) of responses indicated that unit leaders reported getting this information indirectly, such as by being told by the SM or knowing when an SM is not at his or her regular duty because of an appointment. Seven unit leaders reported getting specific information on PDHRA results. For five of the unit leaders, this consisted of an aggregated report on “the number of problems versus non-problems...[and] the follow-up procedures.” Two unit leaders received information on individual SMs, one through LODs and the other as part of a medical role within the unit.

*What have you heard about SM perceptions of PDHRA? (n=57).* The modal response (40%) was that unit leaders had heard negative perceptions from SMs about the PDHRA. Often, this was related to the “hassles” of waiting in line, having to fill out paperwork, or not knowing how long the event would take. However, the responses from some unit leaders suggested that stigma about mental health or other types of problems may influence SM perceptions of the PDHRA. Two examples:

You can sit back in the bleachers and you can hear. “Be careful how you answer the question. This is a tricky question. They get you on this one.”

There are going to be some people, like, I’m not filling it out because I don’t want to get viewed as having some kind of head problem

Another 28% of responses indicated that unit leaders felt that SMs were ambivalent about the PDHRA process. Some stated it was just a part of ‘standard procedure,’ but other unit leaders

truly meant ambivalent, as in “not supportive, but they don’t hate it.” While 11 unit leaders were unsure about SM perceptions, seven felt that SMs viewed the PDHRA positively. One unit leader felt that the timing of the PDHRA, compared to the PDHA, was more conducive to reporting problems:

I think they’re back in their comfort zone, they realize that they’re not headed back into combat zone any time soon, and I think they’re more willing to recognize some of the issues, and, honestly, they may have encountered new issues reintegrating into their home that they didn’t quite see as a problem when they first came out of the theater. They might be able to say, “You know what, they mentioned this might happen, and now that I’ve had two months, three months, back at – back at home, I can see that my wife and I or my husband and I are getting in a lot more arguments about trivial stuff” or whatever the case is.

However, another unit leader suggested that SMs may not be forthcoming about problems even though they were generally supportive of the PDHRA process:

Now that I would say that probably some people – most people are honest, I would say. But then I would say – here’s what I’ve noticed. People that have done it more than once know what triggers an appointment. People on the first deployment, they’re going to answer it honestly, and if it doesn’t trigger an appointment, they’ll continue to do so. Do you see what I mean?...But if it’s triggering an appointment for something that they are like, “Are you kidding me? Really? Wow.” You know?

*Are you involved in providing any kind of introduction for the PDHRA? (n=54).* The large majority of responses (91%) indicated that almost no unit leaders reported that they were involved in any kind of training, brief, or other formal contact with SMs prior to the process. Of the five who were, they typically provided informational briefs to the SMs in their units about the PDHRA process and what to expect. Two unit leaders specifically mentioned encouraging SMs to fully disclose, as highlighted by this quote: “I would just add my own personal input to [a script]. You know, I’m just trying to express my endorsement of it, my, you know, I guess kind of throw my weight behind it to kind of help motivate the soldiers to complete it and complete it accurately.”

*Did they share a personal experience to encourage help-seeking? (n=55).* Unit leaders were asked whether they had ever shared a personal experience with service-related mental health problems or treatment as a way of encouraging help-seeking in their SMs. Over half of responses (56%) indicated that unit leaders reported they had done so, with equal numbers saying they either had not (24%) or had not had the opportunity to do so (20%). Of those cases where the unit leader had shared personal stories, it was sometimes with individuals or in small groups, such as “one-on-one a little bit talking about war stories,” but for others it was part of encouraging SMs to be open on the PDHRA:

I have a tendency to use my own personal experience to try and let them see that, you know, the [NCO] is human too and so, you know, there might be an age

difference or there might be a perspective that I'm old and I don't understand, you know, you're just telling me what to do. But if I can tie that to a personal experience and maybe that triggers something in the [SM] that says, 'You know what? I've had that same problem and I'm no different than the [NCO].' If that helps them seek help for something, great. Having trouble, you know, sleeping – hey, we're all human. That's okay. Same thing if you have hearing or if you're depressed or you need to talk to somebody – those kinds of things. So I use own personal experience quite a bit. I think it helps personalize it and makes it a little more real for them.

Among those unit leaders who did not share such stories, many gave no reason. However, others reported that they used exemplar stories (e.g., "I think we had an [officer] in the office who committed suicide"). Only two said they specifically did not want to "show a [SM] weakness." As explained further by a different unit leader, "As a leader you tend not to show weakness around your [SMs], and whether it be a physical injury or mental health issue, you try not to let your Marines know that you have those problems because you want them to look up to you as a – you're basically a symbol of strength to them."

#### ***Lack of Awareness of Current Security Clearance Policy***

Unit leaders were asked three questions about the change in security clearance policy that does not require military personnel to disclose any deployment-related treatment that they have received.

*Are you aware of the change in policy? (n=57).* The majority (75%) of responses indicated that unit leaders were not aware of the policy.

*Do you think the change will influence how SMs report problems on PDHRA? (n=46).* After the policy had been discussed (for those not previously aware), responses were evenly split on whether unit leaders thought it would influence SMs openness (48% yes, 52% no). However, some of the responses were nuanced, such as:

You know, you always hated to go see the doc or you hated to go to a hospital because it would always come back to bite you. And, uh, this is one step and then sending the word that, hey, it's not going to come back and bite you. You're still a productive member of our organization, and we need you...but there are some things, um, based on what the clearance is for and what you're doing that you have to be at higher level awareness. So I don't think across the board it's not going to be a – I think there's exceptions to [the new policy].

There were a variety of reasons given why the policy change may not influence SMs openness on the PDHRA. For example, that the stigma around mental health issues would overcome the change in policy, that a security clearance wouldn't matter to some SMs, or that someone in need of help would seek it out regardless of their security clearance.

*Do you think it will affect officers differently than enlisted SMs (n=16).* Of note, few (10) unit

leaders thought the change in policy had been communicated to SMs. When asked if the policy would affect officers differently than enlisted SMs, slightly more than half (56%) of responses indicated unit leaders said it would. Reasons included the “way the promotion system works,” but generally a sense of higher expectations for officers (who were also more likely have higher security clearances). In the words of one unit leader:

But if, uh, a [low-ranking enlisted SM] has a problem, they expect the [SM] to have a problem. If [an officer] has a problem, yeah, there’s probably more of a stigma associated with that. ‘Oh, yeah, you’re in charge of more, you’re responsible for more, so you can have fewer problems.’

***General Level of Support for the PDHRA Among Other Officers and NCOs (n=46)***

Of the 46 unit leaders who responded to this question, around half (52%) felt that the PDHRA was generally supported by other officers and NCOs. Types of support ranged from agreement with the overall goal, because they think it is a beneficial program specifically, not just for compliance sake. Primarily, the reasons for support had to do with SM well-being as shown in the following examples:

I would just have to say right now, I mean, the number of deployments people have gone through and everyone knows someone who needed help, and if they didn’t get it or has heard of someone in another unit that didn’t seek the help.

Well, at our installation I think it’s very positive, and it’s evident by the [high] compliance rate. I think that commanders, unit commanders, are taking it seriously, that this is the way to make sure that our [SMs] that are coming back can be taken care of and in turn will be more productive in the future for the next round of deployments...and making sure that their wellness level is what it needs to be.

I would say among the leadership the support is pretty high. They definitely want the [SMs] to do it. They want to try to identify the [SMs] that have problems. It’s nice because I think of the days in the military where you had issues and they just tried to say, well, just deal with it ... Now they’re more like, okay, we know you have a problem and you really need to take care of it, and this helps identify some of those SMs.

Another third (35%) of unit leaders stated that officers and NCOs support of the PDHRA is due to their having to comply with the order to have SMs complete the process. As one unit leader stated, “it [the support] is there, but it’s there because it is a requirement.” The remaining unit leaders were unsure or unclear about their opinions.

***Conclusions***

While the results from this chapter may not be generalized to the PDHRA process as a whole, they do generate several of hypotheses for testing in future research.

The observations made by the VU team indicated that while the majority of installations ensured adequate privacy for the PDHRA process, there was one site where it was noted that SMs completed the self-report section on computers whose screens were not fully blocked from others. In addition, at two sites the arrangement for the PDHRA interview between the SM and the clinician did not provide adequate privacy, as their conversations could be overheard by others. Given the pervasive sense of stigma attached to mental health problems/treatment, and the often negative perceptions of the PDHRA itself (described further below), ensuring adequate privacy and comfort for SMs undergoing the PDHRA process would be an important procedural change to implement.

Personnel associated with the PDHRA (unit leaders, program managers, PDHRA clinicians, and behavioral health consultants) generally view the process as useful to increasing SMs' access to healthcare. However, according to unit leaders, SMs may view the PDHRA as just more paperwork that often involves long waits. As observed at one site, and relayed through various interviews, the efficiency and potentially the effectiveness of the PDHRA process may be influenced by the limited availability of sufficient clinicians that in turn, decreases the amount of time for each interview. A notable exception to this was found through observation and interviews with one site with small throughput and clinicians who were familiar with SMs.

The PDHRA process provides an important opportunity to educate SMs and their unit leaders on the purpose of the PDHRA, including how it may benefit them individually and their units as a whole. While educational materials and resources, including briefs, were noted at almost all locations, at only two installations were there incentives to encourage SMs to interact with the materials. Observers noted SMs using educational materials at only four installations, although this may have occurred during non-observation periods. Aside from passive materials, PDHRA-specific pre-briefs provide an opportunity to inform and engage SMs right before they engage in the process. While there was usually some type of pre-brief observed, at only six of the 10 sites was the PDHRA mentioned by name, and only three of those pre-briefs explained the process. In addition, varied perceptions of the need for education were in evidence from the interviews. Some felt the PDHRA should be familiar, so no education was needed. Others, including program managers, unit leaders, and clinicians (both PDHRA and behavioral health) suggested that at a minimum, SMs should be informed about the purpose and benefits of the PDHRA. Similarly, a number of personnel involved in the PDHRA process mentioned that basic information on the development and use of the PDHRA would be considered a helpful part of training.

A common theme was that command support played a vital role in not only educating SMs, but more generally setting the stage to encourage SM openness during the process. Indeed, command support was considered a vital component of all aspects of process, including scheduling, ensuring compliance, and fostering openness. As suggested by some program managers, and by unit leaders themselves, the value of the PDHRA may not be completely understood by commanders. Although the PDHRA is a command-driven program, it is not clear that many unit leaders directly experience the benefits. While many unit leaders indicated that the PDHRA positively affected their SMs military readiness, the majority did not feel that the process influenced their ability to identify SMs with physical or mental health problems. One potential strategy would be provision of aggregated information on SM problems and referrals resulting

from the PDHRA, which may serve to increase perceived value of the program. It may also be of use to link PDHRA compliance results with unit leader performance assessment as may be done for other duties, whether medical or non-medical.

Notably, a behavioral health specialist and/or chaplain was available at all sites, and behavioral health screening was often included as part of the PDHRA. According to behavioral health consultant interviews, *how* the consultant is included in the PDHRA process may be important to SM comfort with and utilization of such resources. Behavioral health consultants where they were just ‘one of the providers’ felt that they saw more SMs and that their service was less stigmatizing than did consultants who were only involved in the process after SMs formally agreed to be seen. Further, being available at the time of the interview, ideally face-to-face, was seen as important. Many behavioral health consultants felt that such a screening should be a standard component of the PDHRA process, at the least for SMs who screen positive for behavioral or alcohol use problems and ideally, for all SMs.

The referral process varied substantially at different locations, and by Branch/component, although PDHRA personnel all described using non-military installation resources such as Military OneSource. Differences in referral are to be expected, since referral resources vary geographically and procedures vary, such as for referral assistance or tracking. However, further exploration of the utility of assistance with making appointments and monitoring appointment completion would be a useful component of any further research into the effectiveness of the PDHRA on actually getting SMs into care where warranted. Although the intent was to interview case managers in addition to other key personnel, only one such interview was accomplished. This interview was not included in this report to protect the individual’s identity.

Given that the primary purpose of the PDHRA is to provide referrals to SMs in need of further evaluation for deployment-related problems, there were several findings that suggest areas for further inquiry. Some PDHRA clinicians reported that they felt constrained in the type of referrals that could be made (e.g., to Primary Care only), which was seen as impacting SMs’ access to appropriate care. Further, referral decisions could be questioned by referring providers for various reasons, including perceptions that the assessment was not valid due to its time-limited nature. A potential area for improvement could be increased communication and feedback between PDHRA clinicians and installation providers (e.g., through weekly reports and case review) to enhance a sense of collaboration and acceptance of the PDHRA as a useful mechanism for identifying SMs in need of care. Such a feedback mechanism was rarely mentioned by PDHRA clinicians as a quality enhancement strategy, although some mentioned internal peer review processes.

As a related issue, further training for all related personnel could serve to improve clinicians’ systematic approach to the review of the DD Form 2900 and accompanying interview. PDHRA clinicians consistently reported a communal understanding of the process consistent with established guidelines (e.g., [www.pdhealth.mil](http://www.pdhealth.mil)) including clarifying and confirming SM responses on the DD Form 2900, conducting a risk assessment, and making referrals for further evaluation where warranted. The goal of educating SMs about concerns, healthcare, and treatment options was also mentioned, but less frequently. However, there were several examples of seeming misunderstandings about the process (e.g., clinicians who were not sure they could

see the DD Form 2900, discomfort with the risk assessment) and documentation (e.g., using different areas on the form for notation). While the traditional medical training approach of ‘see-do-teach’ was reported at several installations, PDHRA-specific training could enhance consistent approaches to reviewing the SM self-report, conducting further inquiry into potential problems, providing brief education on common issues faced by SMs post-deployment, and systematically documenting on the form itself. Further, as a DoD-wide issue, it appears that installation-specific variation in the process is contributing to differences in how the process is conducted, which will decrease DoD’s ability to utilize aggregated information from the PDHRA as an ongoing assessment of SM problems and referral patterns. In addition, there were suggestions that the algorithm used to trigger further inquiry into alcohol use problems is too sensitive, and should potentially be based on impaired functioning rather than number of drinks.

Of more concern, many PDHRA clinicians felt they did not sufficient time to conduct the interview or establish the rapport needed to encourage SM disclosure of problems and provide education in general. The pace of interviews and pressure to meet expectations contributed to feelings of stress and job burnout in some clinicians who were interviewed, potentially contributing to higher staff turnover. Further research is needed to explore different models of providing the PDHRA process (e.g., as part of larger events, as individual appointments within a medical setting, etc.) to determine not only potential variations in PDHRA effectiveness and efficiency, but also personnel job satisfaction and retention rates.

The stigma associated with behavioral health and alcohol use problems was mentioned by all personnel who were interviewed as it may influence SM disclosure of problems and use of healthcare resources. In addition to general stigma (e.g., being seen as weak), concerns about the impact on one’s military career were prominent. Unit leaders acknowledged this problem, and many reported sharing personal stories or experiences as a way of encouraging SMs to be forthcoming on the PDHRA. A clear recommendation for attempting to decrease stigma is greater command support, not only for the PDHRA process itself, but in relation to behavioral and alcohol use problems in general. Involvement of unit leaders in PDHRA education, such as pre-briefs would be a simple way of explicitly involving unit leaders in the process. Notably, 91% of unit leaders said they had not been involved in such education. Role-modeling by unit leaders through sharing personal experiences is another potential strategy, although some unit leaders expressed their perceptions that showing such ‘weakness’ is inappropriate for those in leadership positions. As a related issue, there was a lack of knowledge among unit leaders about the recent DoD policy change to reporting of service-related treatment for security clearance. Their mixed perceptions of whether or not such a change would have any effect on actual behavior suggest that attempts to decrease stigma will continue to be a complex and difficult process.

### **Relationship to Other Evaluation Findings**

This chapter describes both observations and interviews with key PDHRA personnel that suggest site differences may influence how the PDHRA process works in a variety of ways. These differences may contribute to the relatively low percentage of variability accounted for (27%) by the PDHRA in referrals, as reported in chapter 4. One possible source of variability is the clinician. Findings reported in chapter 9 show that when SMs complete multiple PDHRAs for the same deployment, SM-reported problems are highly correlated, while clinician concerns and

referrals are much less so. A lack of PDHRA-specific training may be a contributing factor. Active duty clinicians interviewed and reported on in the present chapter report receiving little, if any, formal training specific to the PDHRA or feedback about their performance.

Clinicians interviewed for this chapter opined that up to a third of SMs may not fully disclose symptoms on the PDHRA, especially mental health or alcohol problems. Findings reported in chapter 6 show that about 12% of SMs admit not fully disclosing alcohol or emotional problems on the PDHRA; this may be especially true for those seeking promotion in the near future. In fact, a substantial minority of SMs admitted to having a problem on VU's SM survey, but did not report a problem on the PDHRA, as reported in chapter 6. This raises concerns regarding the finding that clinicians may minimize alcohol concerns or believe the screening is too sensitive, as reported in chapter 7. It also suggests that clinicians should ask about mental health concerns even when no symptoms are endorsed by the SM on the PDHRA. As reported in chapter 7, clinicians often did not ask about mental health symptoms unless they were already endorsed by the SM. These findings are consistent with findings from the clinician interviews in this chapter, where generally clinicians reported that their approach to the PDHRA was to review positive endorsements from the SM self-report. Such an approach would not lend itself to uncovering unreported symptoms in the interview.

Several clinicians were concerned about the short duration of PDHRA interviews. They mentioned that the short duration did not allow time to build rapport or trust with the SM. This is related to findings in chapter 7 that rapport building techniques are used variably, and more complicated techniques were used less often. In chapter 6, most SMs reported interview durations of less than 10 minutes.

Further, as reported in chapter 6, SMs who were familiar with the PDHRA clinician were less likely to agree that they had fully disclosed physical, emotional, and alcohol use problems on the PDHRA. This is in contrast to the interviews with clinicians at the one site where they were also unit providers, where the clinicians felt that their familiarity with the SMs was conducive to the PDHRA process.

Importantly, findings in chapter 6 suggest that unit leadership support of the PDHRA process increases SMs' willingness to disclose symptoms and their satisfaction with the PDHRA provider. This suggests that unit leadership could play an important role in encouraging SMs to disclose during the brief PDHRA form completion and interview.

### **Limitations and Directions for Future Research**

There are significant limitations on the generalizability of these findings for several reasons. First, the number of site visits that would be needed to apply findings to other installations, Branches, or components was beyond the scope of this evaluation. Second, the sites were not chosen randomly but rather based on time of VU research team availability (within a four-month window) and a minimum expected throughput. Third, the observations were done as one of many duties carried out by the VU researchers and do not consist of a thorough observation nor a true random sampling (e.g., first 10 minutes of each hour). Finally, the interviews were largely arranged by convenience of the interviewees and may not represent the full range of perceptions held by key stakeholders.

This chapter suggests several interesting directions for future research into improving the efficiency and effectiveness of the PDHRA process. While implementation of any program or initiative will vary based on local needs and resources, it is important to identify where such adjustments contribute to better outcomes or where they impair the process. For example, not ensuring privacy during the interview is likely to have a negative influence on SM perceptions of the PDHRA and potentially on their problem reporting and acceptance of referrals. However, it is less clear whether clinicians' previous familiarity with SMs or unit leader involvement in PDHRA training and education will have demonstrable effects on the effectiveness of the PDHRA (e.g., how the PDHRA serves to increase SM access to care where warranted). It is our strong recommendation that future analyses of PDHRA data include provision of both installation and clinician identifiers, which would provide a quantitative way to explore the influence of these characteristics on PDHRA outcomes. While these data would not explain why any differences may occur, such information would provide a more systematic approach to quantifying any differences that are found. To better understand specific variations, a survey could be developed based on the findings from this and other chapters to be completed by installation personnel. Rather than focus on attitudes toward the PDHRA, the survey should target basic implementation characteristics (e.g., presence or absence of appointment assistance, how referrals are tracked, PDHRA education delivery methods and personnel involved, etc.).

The findings from such a survey linked to PDHRA data nested by installation and clinicians within installations would provide a rich picture of how implementation variations and clinician characteristics influence the PDHRA process. VU proposed such a survey early on in the development of this evaluation effort, but it was not considered feasible given the other requirements of the current study. While such a large scale study would be resource-intensive, it would increase the validity and generalizability of findings and thus provide more reliable information upon which to base policy and structural recommendations. For additional directions for future research, see Appendix A.

## Acronyms Table

Acronym	Meaning
AC	Active Component
AFHSC	Armed Forces Health Surveillance Center
AGR	Active Guard and Reserve
ANG	Air National Guard
Audit-C	A brief three part screening used to help identify individuals that may have an alcohol-related problem
BAA	Business Associate Agreement
CDR	Commander
COL	Colonel
DASD	Deputy Assistant Secretary of Defense
DEET	N,N-Diethyl-meta-Toluamide (insect repellent)
DMDC	Defense Manpower Data Center
DoD	Department of Defense
DUA	Data Use Agreement
ENT	Ear Nose and Throat
ES	Effect Size
Ft	Fort
FY	Fiscal Years
GWOT	Global War on Terrorism
HCE	Health care encounter
IAA	Institutional Authorization Agreement
ICRC	Inter-Coder Reliability Correlations
ID	Identification
IM	Information Management
IMA	Individual Mobilization Augmentee
IMCO	Information Management Control Officer
ING	Inactive National Guard
IRB	Institutional Review Board
IRR	Individual Ready Reserve
IRR (coding)	Inter-rater Reliability
IT	Information Technology
JP 8	Jet Propellant 8
LHI	Logistics Health Incorporated
Lt	Lieutenant
MEDPROS	The Medical Protection System
MOPP	Mission Oriented Protective Posture
MOS	Military OneSource
MPR	Monthly progress reports
MRMC	Medical Research and Materiel Command

MTF	Military Treatment Facility
N	Number
N-95	Particle Respirator mask (not a gas mask)
NBC	Nuclear, Biological or Bacteriological, Chemical
NCO	Non-Commissioned Officer
NG	National Guard
NIHAC	Northwest International Health Action Coalition
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OTSG	Office of the Surgeon General
PA	Provider Assessment
PCM	Primary Care Management
PDHA	Post Deployment Health Assessment
Pdhealth	Post Deployment Health
PDHRA	Post Deployment Health ReAssessment
FHP&R	Force Health Protection and Readiness
PIMR	Preventive Health Assessment and Individual Medical Readiness
POC	Point of Contact
POM	Project Oversight Manager
PTSD	Posttraumatic Stress Disorder
Q	Question
R	Reserve
r	Correlation
RADAR	Radio Detection and Ranging
RIAS or RIASWorks	Roter Interaction Analysis System
SD	Standard Deviation
SM	Service Member
SR	Self-report
SRS	Simple Random Sampling
SSN	Social Security Number
Std	Standard
TBI	Traumatic Brain Injury
TM	Task Manager
TM/TOO	Task Manager/Task Order Officer
TMA	Tricare Management Activity
TOO	Task Order Officer
USAMEDCOM	United States Army Medical Command
VHA	Veterans Health Administration
VICS	Vanderbilt Internal Coding System
VU	Vanderbilt University
WHS	Washington Headquarters Services

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Program Evaluation of Post Deployment Health Assessment (PDHA)  
and Reassessment (PDHRA) Processes  
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**Appendices**

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## **Appendix A: Future Research Directions**

The purpose of this appendix is to list future research questions and analyses that might be considered in additional studies of the PDHA/PDHRA processes. As indicated below, some of these questions could have been addressed with the data obtained for this evaluation, but because of resource limitations, analyses presented in the main body of the report were considered higher priority. Other questions became apparent only once analyses were already under way. Please also see Appendix C, regarding the referral follow-up study, and Appendix D regarding the cost analysis. These two sub-studies were attempted, but not completed for this evaluation. Appendices C and D offer a full explanation of why the studies were not completed and should be useful as a guide to those asking similar questions in the future.

- 1) In the past year, the number of suicides in the Army has heightened awareness and concern about military suicides. At this time we are unaware of any systematic examination of PDHA and PDHRA forms when examining suicide. Do the PDHA or PDHRA show any indication of the potential for suicide completion? Analyzing these cases as a group could potentially help identify at risk individuals. We suggest that the new \$50 million study of suicides being funded by the Army and undertaken by a consortium led by the National Institute of Mental Health seriously investigate the PDHA and PDHRA as a source of information about suicides.
- 2) How does the overall severity of the war zone influence types and rates of symptoms reported on the PDHA and PDHRA? Combat operations are not static, and SMs deployed to the same locations at different times will have different experiences depending on the level of operations. The level of operations could be quantified by the number of SMs killed in action or wounded in action per month. The severity of operations could be either positively or negatively correlated with war zone. Increased severity would be expected to lead to increased SM problems, but it may decrease reporting of symptoms because when things are bad for many people, individuals may see their own experiences as less problematic. If this is the case, information about severity of combat operations could aid in identifying at risk individuals.
- 3) Questions 21, 22, and 23 on the PDHA (2008 version) ask about health protection measures used by SMs. What is the relationship between use or non-use of protection measures and later physical health and exposure concerns on the PDHRA?
- 4) The underlying goal of the PDHRA is to increase SMs' access to appropriate care. The health care encounter data (HCE) used in this report included ICD-9 (diagnostic) and CPT (type of service provided) codes. These codes could be examined to see if HCEs after the PDHRA relate to the types of concerns and referrals documented on the PDHRA. This analysis is one way to understand if referrals from the PDHRA are appropriate; i.e., do SMs receive diagnostic codes that are consistent with the PDHRA?
- 5) Chapter 4 reports only on the PDHRA. More insight into post-deployment screening could results from examining the PDHA in a similar way, i.e., examining the PDHA for SM-reported problems, the clinicians' risk assessment, referrals, and concerns, and then relating all of this to health care encounter data, and finally showing the relationship to the PDHRA.

- 6) How are health care encounters (HCE) related to the PDHRA and PDHA together? Chapter 5 reports on the relationship of the PDHA to the PDHRA, but does not examine how the type of HCE is related to the forms. HCE analyses in the current report were limited to 6 weeks before and after the PDHRA, but the analysis suggested here could expand this time frame.
- 7) Chapter 6 reports on the SM survey administered to SMs during Vanderbilt site visits to PDHRA events. The chapter was limited mainly to the relationship between the survey and SM-reported symptoms. Further analysis could emphasize the relationship between the survey and clinician concerns and referrals.
- 8) Chapter 7 reports on a content analysis and an analysis of clinician communication patterns for a sample of recorded calls from the contracted agency that conducts telephone PDHRA assessments for Reserve and National Guard SMs. A future study could include a larger number of interviews and more fully explore content and communication patterns. Furthermore, the communication pattern analysis included only provider communication, but SM communication was also quantified and could be analyzed in future studies.
- 9) One of the goals of this evaluation was to understand if the context of the clinical interview (telephone vs. in-person) influenced SM disclosure of symptoms or acceptance of referrals. Because interview context is confounded with other factors (size of unit, Branch and component), a controlled randomized study is the best way to answer these questions. Unfortunately we did not find any units willing to participate by assigning SMs who would otherwise have received in-person interviews to receive telephone interviews. A future experiment is needed to determine if interview context changes the PDHRA process (see also Chapter 8).
- 10) Appendix N reports descriptive statistics for the PDHA and PDHRA for each Branch and Component. Future analyses should explore Branch and Component differences.
- 11) The interviews conducted by Vanderbilt researchers during site visits are reported in Chapter 10. The unit leader interviews were fully content-analyzed, but the program manager and clinician interviews received a more limited analysis. This analysis could be expanded to a full content analysis. Furthermore, analyses should include looking at differences within and across sites.
- 12) Chapter 9 reports differences between PDHA and PDHRA forms when there are multiple completions for the same deployment. The analysis did not include intervening HCE, which could explain some of the differences observed between form completions. The results of the chapter also suggest that a more systematic approach be used to examine the reliability of clinician interviews by selecting representative cases that would receive two interviews at selected intervals.
- 13) Appendix P compares the 2005 and 2008 versions of the PDHRA for the areas of alcohol and TBI. A more comprehensive analysis could examine additional differences between the forms.

- 14) Since many SMs were potentially interviewed by the same clinician, SMs are clustered within clinicians and clinicians are nested within sites; therefore, these observations are not independent. Future research should address the nesting nature of these data using hierarchical linear models (HLM). HLM or multi-level analysis is widely used in the behavioral, social, and educational fields where predictor variables are measured at more than one level (1). Unfortunately, clinician and site identification were not included in the data received for this report, so this analysis was not possible.
- 15) The best way to understand the role of the clinician in the PDHRA process is to conduct a randomized controlled experiment with SMs randomly assigned to one of the following groups:
- a) Clinician assessment only (the SM sees the clinician, but does not complete a PDHRA form)
  - b) Blind self-report (the SM completes the self-report but the clinician does not see it)
  - c) Self-report and clinician assessment (the typical PDHRA process)
  - d) Control (PDHRA delayed by at least two months)

Comparison of clinician concerns and referrals, and SM health care encounters among these groups would help establish the role of the clinician in the PDHRA process.

## **Appendix B: DoD Coordination and Communication**

Table B.1 describes DoD personnel involved in project management.

**Table B. 1. DoD personnel involved in project management**

<b>Role</b>	<b>Who</b>
Task Manager/Task Order Officer (TM/TOO)	Col Joyce Adkins (September 2007 – December 2008), Col Kenneth Cox (January 2009 – March 2009), Dr. Brian Sugden (March 2009 – present)
Contracting Officer's Representative (COR)	Ms. Sydna Taylor
Project Oversight Manager (POM)	Dr. Brian Sugden (December 2008 – present), Dr. Charmaine Harrington (June 2008 – October 08)

Project management occurred primarily through twice monthly teleconference meetings between Vanderbilt University (VU) and the POM and via monthly progress reports (MPRs) submitted to the TM/TOO and COR. Teleconference meetings with the POMs were used to provide updates to the POMs and to discuss issues related to the progress of the project. The MPRs detailed all substantial activity on the project during the previous month: problems encountered and proposed solutions, and an updated budget of monies spent and remaining.

Communication and coordination with individuals outside Vanderbilt occurred primarily through meetings detailed in Table B.2. There were essentially five types of meetings as follows: project management, site visit planning/data collection, approvals, Expert Panel consultation, and presentations. In addition, the internal Vanderbilt team had at least weekly meetings to discuss the project; these meetings are not included in the table.

**Table B. 2. VU external meeting schedule**

<b>Type</b>	<b>Total Number</b>	<b>Modality</b>	<b>Brief Description</b>
Project Management	41	Teleconference/ In person	The majority of these were twice monthly meetings with Dr. Brian Sugden.
Site Visit Planning/Data Collection	72	Teleconference	Communication and coordination related to: site visit planning with all Services, LHI audio tapes and SM survey distribution, and requests to AFHSC for the secondary analysis data set and linking files
Approvals	19	Teleconference	Communication with VU IRB, TMA, AFHSC, MRMC, and DMDC
Expert Panel	3	Teleconference	Project guidance and feedback
Presentations	4	In Person	Annual Army PDHRA Conference, Army PDHRA Quarterly IPR, and Expert Panel

***Expert Panel***

Table B.3 lists members of the PDHRA Expert Panel who have been a valuable resource by advising VU on many aspects of this project. Meetings with the Expert Panel members (see Table B.2) were held to discuss the typical PDHRA process in each Branch and Component, to identify training/implementation materials that might be shared with VU, to identify potential locations for site visits, and for VU to receive feedback on various aspects of the project, including implementation plans and interpretation of results. After most meetings, VU followed-up by email with additional questions and to request training and implementation materials if available.

**Table B. 3. PDHRA Expert Panel Roster**

<b>Who</b>	<b>Branch/Comp</b>	<b>Role</b>
Mr. Jerry Fushianes, Mr. Brian Hafner Mr. Joe Reis	All branches, Reserve/National Guard	LHI PDHRA Program Manager.
LTC Karen Whitman and LTC Jacquelyn Russek Col Shirley Kyles	Army Active Duty	PDHRA Program Manager (Whitman), PDHRA Army training and guidance (Russek) Army Medical Command, Office of the Surgeon General--USAMEDCOM OTSG (Kyles)
Maj Torrey Hubred	Army National Guard	Army National Guard G1
Lt Col Gregory Bobel	Air National Guard	(ANG/SGOP)
LTC Tracy Neal-Walden	Air Force Active	Medical Operations Agency
CDR Janelle Merritt	Navy Reserve	COMNAVRESFORCOM PDHRA Program Manager
Dr. Fred Glogower and CDR Faith Burrell	Navy Active	PDHRA Program Manager, Bureau of Medicine and Surgery--BUMED (Glogower) and DHC expert (Burrell)
Mr. Darnell Neal	Marine Forces Reserve	MARFORRES G-1 PDHRA Program Manager
Mr. Mark Wright and Mr. Rich Roeske	Marine Active Duty and Marine Forces Reserve	PDHRA Program Managers
Col Terry Washam	Veterans Administration	Veterans Health Administration (VHA) Senior Military Liaison, VHA/DoD Outreach Office

### ***Approvals and Data Requests***

The execution of this project required analysis of existing data collected and stored by DoD, as well as the collection and analysis of new data specific to this project. The timelines for these processes are outlined in the following sections.

### **Data Requests**

The existing data from DoD were requested in three stages. The initial data request, which included de-identified PDHA, PDHRA, and health care encounter (HCE) records from January, 1 2006 – August 31, 2007, was made in mid-November, 2007, but the data were not received for six and a half months (see Table B.4). As instructed by DoD, VU completed a data use agreement (DUA) and submitted the request to TMA in mid-November, 2007. After more than 2 months, the VU request was denied because TMA owns only the HCE data, but not the PDHA

and PDHRA data, and was therefore not authorized to release these data. The subsequent two months were spent investigating the proper channels and requirements to receive the data. The TMA DUA initially required that VU sign a business associate agreement (BAA); however Vanderbilt officials were not able to sign a BAA because the security requirement could not be met. Ultimately, VU requested and received the entire data set directly from AFHSC.

**Table B. 4. First Year Data Request**

	4 <sup>th</sup> Quarter 2007			1 <sup>st</sup> Quarter 2008			2 <sup>nd</sup> Quarter 2008			3 <sup>rd</sup> Quarter 2008		
	October	November	December	January	February	March	April	May	June	March	April	May
<b>VU/TMA IRB approvals</b>												
<b>TMA Processing DUA</b>												
<b>Investigating how to receive data</b>												
<b>AFHSC Processing</b>												

Anticipating delays for the second data request, which updated the first data set through March 15, 2009, preliminary communication was begun early, and approvals completed in a timely fashion (Table B.5). The request for the complete secondary analysis data set was made in early April, 2009, but the data were not received for two and a half months. In the initial data set received, major variables were found to be missing or incomplete such as dates and Service/Component. VU requested a revised dataset that was received one and a half weeks later.

The third and final request for existing data was made in June, 2009, and included three additional months of data (March 15, 2009 – May 29, 2009) that would update the data set to include data from SMs who completed the PDHRA process during VU site visits. These data were received by late-June (no Table).

**Table B. 5. Complete Secondary Analysis Data Request**

	3 <sup>rd</sup> Quarter 2008			4 <sup>th</sup> Quarter 2008			1 <sup>st</sup> Quarter 2009			2 <sup>nd</sup> Quarter 2009		
	July	August	September	October	November	December	January	February	March	April	May	June
<b>Communications (at least 9 emails)</b>												
<b>VU/TMA IRB approvals</b>												
<b>AFHSC processing</b>												

A unique aspect of this project is that the PDHA, PDHRA, and HCE data sets were linked to each other, and also to the SM questionnaire administered by VU at site visits, to the mode (telephone or in-person) of administration for those completing with LHI, and to id numbers associated with a sample of de-identified audio recordings of PDHRA interviews received from LHI. That is, records from each individual were linked together with the same id number. Although these records were linked, they remained de-identified. These linking files were created and stored by DoD, and any identifying information was removed from data files before sending them to VU. These linking files allowed us to analyze each data set in relation to the others, providing an unprecedented breadth of information about factors related to the PDHRA process. In an attempt to avoid delays in receiving the linking files, communication with the AFHSC individual creating the files was initiated in December, 2008, and approvals were completed quickly (see Table B.6), and the files were requested in early June, 2009. The initial files received contained errors and had to be re-created, so the final data were not received until three months after the request.

**Table B.6 PDHRA/Linking File Data Request**

	3 <sup>rd</sup> Quarter 2008			4 <sup>th</sup> Quarter 2008			1 <sup>st</sup> Quarter 2009			2 <sup>nd</sup> Quarter 2009			3 <sup>rd</sup> Quarter 2009		
	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September
<b>Communications (at least 4 emails)</b>															
<b>VU/TMA IRB approvals</b>															
<b>AFHSC processing</b>															

## Approvals for Human Subjects Research and Licensing

### Human Subjects

The use of human subjects was reviewed and approved by the Vanderbilt University Institutional Review Board (VU IRB) and by TMA IRB, and was necessary for the following aspects of our study: secondary analysis, site visits, Service member (SM) questionnaire, the referral follow-up study (which was ultimately cancelled), and the call center audiotape analysis. These studies are described in more detail in previous sections of this report. First, a detailed protocol that described specific procedures associated with the study was submitted to the VU IRB. Once approval was obtained, the protocol was submitted to the TMA IRB for review. Additional approvals were necessary for site visits (see Site Visit Approvals, below).

### Licensing

Licensing of our survey instruments was required according to the Paperwork Reduction Act of 1980, DoDI 1100.13, DoDD 8910.1-M, and DoDI-7750.7. This was a multi-step review process involving Defense Manpower Data Center (DMDC), TMA Privacy Office, an Information Management Control Officer (IMCO), and Washington Headquarters Services (WHS). Once these reviews were completed, a license number was issued to VU for each survey instrument.

### Site visit approvals

Tables B.7 and B.8 compare the anticipated vs. actual time for obtaining approval for site visits. Based on information provided by the government, VU planned two and a half months for IRB approvals and WHS licensing, however the actual time required for these processes was 12 months.

**Table B. 7. Anticipated timeline for site visit approvals process**

	4 <sup>th</sup> Qtr 2007				1st Qtr 2008			2 <sup>nd</sup> Qtr 2008			3 <sup>rd</sup> Qtr 2008			4th Qtr 2008			1st Qtr 2009			2 <sup>nd</sup> Qtr 2009		
	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June
Prep and protocol																						
VU/TMA IRB approval																						
Licensing																						
Conducting Site Visits																						

**Table B.8 Actual timeline for site visit approvals process**

	4 <sup>th</sup> Qtr 2007				1st Qtr 2008			2 <sup>nd</sup> Qtr 2008			3 <sup>rd</sup> Qtr 2008			4th Qtr 2008			1st Qtr 2009			2 <sup>nd</sup> Qtr 2009		
	September	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June
Prep and protocol																						
VU/TMA IRB approval																						
Licensing																						
Conducting Site Visits																						

VU put procedures in place as informed by government contacts to expedite the approvals process (i.e., an Institutional Authorization Agreement) (IAA), but due to the lack of an approval authority that covers all of DoD, obtaining approval to conduct site visits turned out to be more complicated. It became necessary to obtain approval from each Service Branch individually. Reviews by the Navy, Marines, and Air Force were rather brief, but the Army required approval be obtained from the U.S. Army Medical Research and Materiel Command (MRMC), which serves as IRB for the Army.

During the approval process, VU maintained communications with all interested parties, including Dr. Brian Sugden, the project oversight manager, to navigate the most efficient approvals process possible. The delay in approvals impacted the project schedule. The completion of site visits was delayed by four months; as a result of this delay, time to conduct site visits for data collection was compressed into four months instead of the originally planned six months. In summary, the start of site visits for the purpose of data collection was delayed by five months due to complications in the approvals process. The completion of site visits was delayed by three months in part by the implementation of a specialized study of Battlemind II at Ft Campbell, which pushed visits into April of 2009. This very limited window of opportunity for data collection meant that resources had to be redirected to site visits leaving less available for other project activities (e.g., analysis). To partially accommodate for these delays which were no fault of VU and allow more time for analysis and completion of the report, the government extended the contract two months at no cost to the government. The documents requesting and showing approval of this contract modification are provided below.



TRICARE  
MANAGEMENT  
ACTIVITY

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
HEALTH AFFAIRS  
SKYLINE FIVE, SUITE 810, 5111 LEESBURG PIKE  
FALLS CHURCH, VIRGINIA 22041-3206

26 June 2009

MEMORANDUM FOR USAMRAA

(ATTENTION: Mr. Daniel Signore)

THROUGH TMA Procurement Support Office (ATTENTION: RoDonda Thompson)

SUBJECT: Request Modification to Contract # W81XWH-07-P-1026 (Contractor: Vanderbilt University), to conduct an evaluation of the Post-Deployment Health Assessment and Reassessment processes.

This memorandum is provided as notification that FHP&R requests a funded contract modification for the subject contract with a current period of performance of 30 September 2008 through 29 September 2009.

This contract is being administered by USA Medical Research Acquisition Activity: Ms Kelly Green.

The purpose of this modification is to extend the Period of Performance of this contract to finish the analysis and complete the Special Studies. Government delays in providing the data needed for this project have caused the contractor to revise the schedule thus to complete the evaluation out until November 30, 2009.

To reallocate the FY09 funds from CLIN 000402 in the amount of 16,591.43 to FY09 CLIN 000302.

The total funding change to this contract is \$0.00.

An updated deliverable schedule is attached copy of the current contract is attached for this action.

If you have any questions or require additional information please contact:

Requiring Activity POC: Sydna Taylor  
Phone: 703-578-8677

Tommy Morris  
Acting Director  
FHP&R, TMA

Attachments  
As stated

## **Modification of Contract W81XWH-07-P-1026**

**Title:** Program Evaluation for Post Deployment Health Assessment and Reassessment Process

**Date:** 26Jun09

### **2.1.4 Task 3 - Collect and Analyze Data**

#### **Subtask 2.1.4.2**

- In conformance with the approved study design, the Contractor shall perform necessary data analyses. The scope of analyses conducted depends on timely receipt of data requested from AFHSC. The Contractor shall report problems, delays in progress, and the resulting consequences to the TOO and TM.

#### **Subtask 2.1.4.4**

- The Contractor shall perform the necessary management of data received from DoD. The data include PDHA, PDHRA, health service utilization, and linking file records. Data management includes verifying that all requested variables and files were received, linking data elements together, and making decisions about how to simplify and sample from the dataset when necessary or useful for answering research questions.

## **4.5 Deliverable Descriptions**

### **4.5.1 Prepare Written Documentation of Project Results**

- The Contractor shall prepare the deliverables as described in the original contract, with all major evaluation areas addressed. However, the report will be simplified to facilitate timely completion. A further qualification is that completing the approved Scope of Work (SOW) depends on receiving all data from DoD by 01 JUL 2009. If the data are not received by this date, the Contractor will make every effort to complete the SOW, but it may be necessary to reduce the number of tasks in the SOW.

## **5.0 Contract Administration Data**

### **5.1 Contact Information for Key Personnel**

- Task Manager/Task Order Officer (TMM/TOO)  
Name: Brian Sudgen  
Title: Task Manager  
Address: 5113 Leesburg Pike, Suite 403  
Falls Church, VA 22041  
Voice: 703-681-3279 ext :167  
FAX: 703-578-8501  
Email: Brian.Sudgen@tma.osd.mil

### 5.3 Anticipated Level of Effort

The following is the estimated level of effort:

Labor Category	Current Hours	ILOE Total Hours	Total Hours
Statistician	0	291	291
Qualitative Analyst	0	280	280
Writers	0	577	577

## **Appendix C: Referral Follow-up Study: Status and Discontinuation**

The referral follow-up study was considered an important component of the larger evaluation. It was the primary approach to defining what is meant by an appropriate referral. Since it was outside of the scope of the project to define an appropriate referral through expert 3<sup>rd</sup> party opinion, we decided that an appropriate referral was one that was deemed appropriate by the Service Member (SM) and the health care provider who received the referral. If, after the appointment, both judged the visit appropriate, then it would meet this operational definition of appropriateness.

Two very brief questionnaires were developed that elicited the opinions of the SMs and providers about the appropriateness of the referral that were to be completed after the visit. The questionnaires and procedure were approved by the Vanderbilt IRB and all other authorities.

This study was discontinued with the DoD program officer's concurrence in March, 2009. The purpose of this document is to describe the obstacles encountered in conducting the study. In addition, we wanted to share SM comments about problems/concerns they had in following up with PDHRA-referred appointments.

The recruitment procedure was consistent with site visit procedures described elsewhere. In the packet containing the SM survey (which was provided to all SMs who had completed the PDHRA process at a site visit), SMs were asked whether they had received a referral and if they were willing to participate in the study. To participate in the study, SMs were required to provide their name, date of birth, email, social security number, and permission for us to contact them, the case/referral manager, and the health care provider(s) to whom they were referred. They were also asked to sign a release of medical information and informed consent form. If possible, referral information (date, provider, etc.) was gathered from a referral manager or other staff at the site visit. The health care provider(s) were to be recruited by email the day after the scheduled appointment with the SM.

All SMs agreeing to participate who completed the SM survey during a PDHRA event and who received a referral were eligible to participate in this study. The follow-up study questionnaires for the SM and the provider were to be completed online, with the link to the questionnaires sent to the SM and provider(s) by email.

We had initially estimated that we would have the opportunity to recruit 4400 SMs for the survey, and that approximately 80% of them would volunteer to complete the SM survey. Based on past referral rates, we expected 28% would receive a referral, and 50% of those would volunteer to participate in the follow-up study. Thus, we anticipated a total of 500 SMs agreeing to participate in this component of the larger evaluation.

From the site visits (prior to discontinuing the follow-up study) where we obtained anticipated numbers of SMs who were expected to go through the PDHRA process, we have estimated a 52% participation rate in the SM survey. The table below presents information on the number of SMs who indicated some interest in participating in the follow-up study

**Table C.1. Relevant Participation Totals from Site Visits**

	<b>Total</b>
Completed SM surveys	1716
SM possible participant in follow-up study	158
SM indicated interest in participating in follow-up study	83
SM eligible for follow-up study	75

Of those who completed a SM survey during the site visits, an average of 4% was considered eligible for the follow-up study. In order to be eligible, a SM had to have several requirements in place: (1) received a referral based on their PDHRA; (2) indicated that they were interested in volunteering; (3) signed a consent form; and (4) completed a medical release form. In addition, since the only contact information requested of the participant was (5) an email address, SMs who omitted their email address were not able to participate. If one or more of these conditions were not met, the SM was considered as having indicated interest in participating in the follow-up study. The evaluators did attempt to contact SMs by email to confirm interest in participating when contact information was given but one of the other participation requirements was unclear or missing. Compared to our initial estimate of participation rates, it may be that the rate of referral was less than 28% contributing to a much lower number of volunteers. It may also be the case that among SMs who did receive a referral, less than 50% were interested in participating. We do not have access to the referral rates from the PDHRA for all site visits.

Of the 75 SMs found eligible and contacted by email to complete the follow-up survey, only 4 SMs completed the follow-up surveys. Based on comments received from 9 SMs during email communications, the evaluators concluded that this type of survey method was not feasible for the study. First, SMs were often not able to identify whether they had received a referral from the PDHRA or through some other process, or whether a subsequent health care appointment was related to the PDHRA. Second, most SMs indicated they were waiting for someone to contact them to schedule the appointment. All comments are included in the table below.

**Table C.2. SM Comments about Referral Process**

<b>SM Comments</b>
"I have not been contacted about my appointment yet." (30 days after PDHRA)
"I have only been able to schedule 1 follow up appointment for [59 days post PDHRA] for my dental issues. For my other issues I have been trying to get ahold of my primary care provider, and he is always out of his office or with a patient when I call, and I am always at work when he calls me. We have been playing phone tag for about 4 weeks now. Hopefully this week we can get it resolved." (38 days post PDHRA)
"I have not scheduled any appointments nor has anyone contacted me regarding my medical matters that we discussed on [PDHRA date]." (19 days post PDHRA)
"I have not scheduled the follow up appointments yet. " (12 days post PDHRA)
"At this time [13 days post PDHRA] I have not been contacted in regards to any referral appointments. I was told I would receive a phone call by [9 days post PDHRA], I did not. When I receive a phone call in regards to my referral I will update you."
"I have not been to any appointments yet because I am not sure how to make the appointment." (15 days post PDHRA - this SM activated the link to the survey and completed it about her referral (rather than about an appointment) saying that SM felt the referral to be both "very appropriate" and "very necessary")
"Sorry but no appointments have been made. I am waiting for them to get back with me. I will let you know as soon as possible once these appointments have been made or completed." (13 days post PDHRA)
"I still have yet to be seen for a referral to have an appointment scheduled." (15 days post PDHRA)
"I have yet to be contacted regarding scheduling a follow up appointment" (31 days post PDHRA)

Due to these problems, the follow-up study was halted on March 9, 2009, and the relevant materials removed from study materials for the two remaining site visits. The evaluation team continues to believe that eliciting information directly from SMs and health care providers regarding PDHRA-referred health care encounters is a vital component to addressing the larger question of how the PDHRA influences access and how to define appropriate care. Communication about roles and expectations regarding appointments and installation-specific systems for managing appointments would be two areas for further consideration.

## **Appendix D: Cost Analysis: Status and Discontinuation**

The cost analysis was intended to evaluate material and personnel costs associated with the PDHRA process. The analysis was to include preparation for and administration of the PDHRA and activity involved up to the initial contact with the referral provider. Our analyses were limited to active military Branches since the Reserve component is screened by a contracting agency whose expenditures are proprietary and thus could not be made available to us.

The effort to perform this analysis was discontinued with the DoD program officer's concurrence in September, 2009. The purpose of this document is to describe the problems encountered in obtaining the information necessary to conduct the analysis.

We proposed to determine PDHRA resources and costs using both a bottom-up and top-down approach. We sought budget information from DoD, and then expenditure information from each of the Services. A memo with specific requests was sent to our point of contact (POC) at DoD. The items requested in this memo are shown in Table D.1.

**Table D.1. Items requested from DoD for the cost analysis.**

We requested information about the following personnel and material resources listed below per month and per year.

**Personnel: For each category of person or task listed below, we need to know pay rate, time spent on PDHRA, and number of persons needed to conduct the PDHRA**

- Tracking when SMs are due for PDHRA
- Alerting SMs/commanders that PDHRAs are due
- IT people devoted to PDHRA (maintenance of PDHRA online forms)
- PDHRA program manager
- Case manager
- Behavioral health consultants
- Screening clinicians
- SM's time (broken down by rank), i.e., how much time SMs spend completing PDHRA
- Commander's time devoted to PDHRA (e.g., briefings or contacting SMs)
- Training for screening clinicians
- Post-processing (e.g., uploading PDHRA data to DoD data bases)
- Referral follow up (i.e., ensuring referral appointments are made and kept)
- Number of SMs processed at a facility per month

**Material resources**

- Computers and software devoted to tracking when SMs are due, sending emails
- Maintenance of PDHRA online forms
- Training materials for clinicians
- Brochures for SMs, educational materials
- Resources to view Battlemind II Training (Army only), or other deployment cycle education

**Other**

- Each service Branch PDHRA budget and number of SMs screened

These items were discussed during a meeting with the POC, and he indicated that this level of information was not available from DoD. He did, however, provide us with a PDHRA budget for each Service for fiscal years (FY) 2007-2009. These budgets were calculated using information from the Services about the estimated number of screenings to be completed each year, but did not include detailed information about individual components of the screening, such as detailed in the Table D.1. Furthermore, budgets are proposed spending plans and are not expenses.

To obtain expenditures, our DoD POC recommended we talk with resource managers in each of the Services. None of the Service-level individuals contacted was able to provide the level of detail necessary for the cost analysis. We simplified our request to include only expenses for the provider screening, program management, and Information Management and Technology (IM/IT) expenses, but this was not available. All Services had two main problems in providing this information. First, they did not track precisely how much was spent on PDHRA providers. That is, although the number of PDHRAs completed is tracked, the number of providers and amount of time they spend doing PDHRA screenings is not. Second, the PDHRA budget only pays for contracted costs, e.g., contracted providers or contracted program management. Military providers or other military employees involved in the PDHRA process are paid from separate funds, and typically perform PDHRA as only one part of their job. Thus, information on military employees involved in the PDHRA process was not available.

Due to the difficulty in obtaining PDHRA expenditures, the effort to complete a cost analysis was halted on September 22, 2009.

**Appendix E: DD Form 2796- April 2003 Version (PDHA)**

# POST-DEPLOYMENT Health Assessment

33348

Authority: 10 U.S.C. 136 Chapter 55. 1074f, 3013, 5013, 8013 and E.O. 9397

Principal Purpose: To assess your state of health after deployment outside the United States in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care to you.

Routine Use: To other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment.

Disclosure: (Military personnel and DoD civilian Employees Only) Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

INSTRUCTIONS: Please read each question completely and carefully before marking your selections. Provide a response for each question. If you do not understand a question, ask the administrator.

## Demographics

Last Name

First Name

Name of Your Unit or Ship during this Deployment

### SMSEX

Gender

- 0 ☐ Male  
1 ☐ Female

### SERVICE

Service Branch

- 1 ☐ Air Force  
2 ☐ Army  
3 ☐ Coast Guard  
4 ☐ Marine Corps  
5 ☐ Navy  
6 ☐ Other

### COMPONENT

Component

- 1 ☐ Active Duty  
2 ☐ National Guard  
3 ☐ Reserves  
4 ☐ Civilian Government Employee

### SMOPERATION LOCATION

Location of Operation

- 1 ☐ Europe  
2 ☐ SW Asia  
3 ☐ SE Asia  
4 ☐ Asia (Other)  
5 ☐ Australia  
6 ☐ Africa  
7 ☐ Central America  
8 ☐ Unknown  
9 ☐ South America  
10 ☐ North America  
11 ☐ Other

To what areas were you mainly deployed:  
(mark all that apply - list where/date arrived)

- ☐ Kuwait **SMKUWAIT**  
☐ Qatar **SMQATAR**  
☐ Afghanistan **SMAFGHAN**  
☐ Bosnia **SMBOSNIA**  
☐ On a ship **SMSHIP**

Name of Operation: **OPERATION**


Occupational specialty during this deployment  
(MOS, NEC or AFSC)

DOD\_POC

Combat specialty:

Today's Date (dd/mm/yy)

D\_EVENT

Social Security Number

DOB (dd/mm/yyyy)

YOB

Date of arrival in theater (dd/mm/yyyy)

D\_ARRIVAL

Date of departure from theater (dd/mm/yyyy)

D\_DEPART

Pay Grade

- 1 ☐ E1  
2 ☐ E2  
3 ☐ E3  
4 ☐ E4  
5 ☐ E5  
6 ☐ E6  
7 ☐ E7  
8 ☐ E8  
9 ☐ E9  
001  
002  
003  
004  
005  
006  
007  
008  
009  
010  
W1  
W2  
W3  
W4  
W5  
Other

Iraq

SMIRAQ

Turkey

SMTURKEY

Uzbekistan

SMUZBEK

Kosovo

SMKOSOVO

CONUS

SMCONUS

Other

SMOTHER

## Administrator Use Only

Indicate the status of each of the following:

Yes No N/A

- ☐ ☐ ☐ Medical threat debriefing completed  
☐ ☐ ☐ Medical information sheet distributed  
☐ ☐ ☐ Post Deployment serum specimen collected

33348

**Please answer all questions in relation to THIS deployment**

**SMHEALTH\_CHANGE**

1. Did your health change during this deployment?

- 1 ☐ Health stayed about the same or got better  
0 ☐ Health got worse

**SMTIMES\_SEEN**

2. How many times were you seen in sick call during this deployment?

--	--

No. of times

**SMHOSPITALIZED**

3. Did you have to spend one or more nights in a hospital as a patient during this deployment?

- 0 ☐ No  
1 ☐ Yes, reason/dates: \_\_\_\_\_

4. Did you receive any vaccinations just before 1 = checked or during this deployment?

- ☐ Smallpox (leaves a scar on the arm) **SMVAC\_SMALLPOX**  
☐ Anthrax **SMVAC\_ANTHRAX**  
☐ Botulism **SMVAC\_BOTULISM**  
☐ Typhoid **SMVAC\_TYPHOID**  
☐ Meningococcal **SMVAC\_MENING**  
☐ Other, list: **SMVAC\_OTHER** \_\_\_\_\_  
☐ Don't know **SMVAC\_DK**  
☐ None

5. Did you take any of the following medication 1 = checked during this deployment?

- (mark all that apply) **SMMEDS\_PB**  
☐ PB (pyridostigmine bromide) nerve agent pill  
☐ Mark-1 antidote kit **SMMEDS\_MARK1**  
☐ Anti-malaria pills **SMMEDS\_MALARIA**  
☐ Pills to stay awake, such as dexedrine, **SMMEDS\_AWAKE**  
☐ Other, please list **SMMEDS\_OTHER** \_\_\_\_\_  
☐ Don't know **SMMEDS\_DK**

6. Do you have any of these symptoms now or did you develop them anytime during this deployment?

No Yes During Yes Now

- 1 ☐ 2 ☐ 3 ☐ Chronic cough **SMCOUGH**  
☐ Runny nose **SMRUNNY\_NOSE**  
☐ Fever **SMFEVER**  
☐ Weakness **SMWEAKNESS**  
☐ Headaches **SMHEADACHE**  
☐ Swollen, stiff or painful joints **SMJOINTS**  
☐ Back pain **SMBACK\_PAIN**  
☐ Muscle aches **SMMUSCLE**  
☐ Numbness or tingling in hands or feet **SMNUMBNESS**  
☐ Skin diseases or rashes **SMRASH**  
☐ Redness of eyes with tearing **SMTEARING**  
☐ Dimming of vision, like the lights were going out **SMVISION**

No Yes During Yes Now

- 1 ☐ 2 ☐ 3 ☐ Chest pain or pressure **SMCHEST\_PAIN**  
☐ Dizziness, fainting, light headedness **SMDIZZY**  
☐ Difficulty breathing **SMBREATHING**  
☐ Still feeling tired after sleeping **SMTIRED**  
☐ Difficulty remembering **SMMEMORY**  
☐ Diarrhea **SMDIARRHEA**  
☐ Frequent indigestion **SMINDIGESTION**  
☐ Vomiting **SMVOMITING**  
☐ Ringing of the ears **SMRINGING**

4 = Yes During and Yes Now

7. Did you see anyone wounded, killed or dead during this deployment? (mark all that apply)

- SMKILLED**  
**SMKILLED\_ENEMY**  
☐ No ☐ Yes - coalition ☐ Yes - enemy ☐ Yes - civilian  
**SMKILLED\_COALITION** **SMKILLED\_CIVILIAN**

10. Are you currently interested in receiving help for a stress, emotional, alcohol or family problem?

- SMRECEIVING\_HELP**  
☐ No ☐ Yes

11. Over the LAST 2 WEEKS, how often have you been bothered by any of the following problems?

None Some A Lot

- 0 ☐ 1 ☐ 2 ☐ Little interest or pleasure in doing things **SMLITTLE\_INTEREST**  
☐ Feeling down, depressed, or hopeless **SMFEELING\_DOWN**  
☐ Thoughts that you would be better off dead or hurting yourself in some way **SMHURT\_SELF**

8. Were you engaged in direct combat where you discharged your weapon? 1 = checked

- SMWEAPON** **SMWEAPON\_LAND**  
0 ☐ No 1 ☐ Yes ( ☐ land ☐ sea ☐ air )  
**SMWEAPON\_SEA**

9. During this deployment, did you ever feel that you were in great danger of being killed?

- ☐ No ☐ Yes



12. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST MONTH, you ....

No Yes

- 0 ☐ 1 ☐ **SMNIGHTMARES**  
Have had any nightmares about it or thought about it when you did not want to?
- ☐ ☐ **SMAVOID\_SITUATIONS**  
Tried hard not to think about it or went out of your way to avoid situations that remind you of it?
- ☐ ☐ **SMON\_GUARD**  
Were constantly on guard, watchful, or easily startled?
- ☐ ☐ **SMDETACHED**  
Felt numb or detached from others, activities, or your surroundings?

15. On how many days did you wear your MOPP over garments?

--	--

No. of days

16. How many times did you put on your gas mask because of alerts and NOT because of exercises?

--	--

No. of times

13. Are you having thoughts or concerns that ...

No Yes Unsure

- 0 ☐ 1 ☐ 2 ☐ **SMCONFLICTS**  
You may have serious conflicts with your spouse, family members, or close friends?
- ☐ ☐ ☐ **SMLOSE\_CONTROL**  
You might hurt or lose control with someone?

17. Were you in or did you enter or closely inspect any destroyed military vehicles?

0 ☐ No 1 ☐ Yes

18. Do you think you were exposed to any chemical, biological, or radiological warfare agents during this deployment?

☐ No ☐ Don't know  
☐ Yes, explain with date and location

14. While you were deployed, were you exposed to:  
(mark all that apply)

No Sometimes Often

- |                         |                         |                         |   |
|-------------------------|-------------------------|-------------------------|---|
| 0 <input type="radio"/> | 1 <input type="radio"/> | 2 <input type="radio"/> | DEET insect repellent applied to skin <b>SMEXP_DEET</b>               |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Pesticide-treated uniforms <b>SMEXP_PEST_UNIFORM</b>                  |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Environmental pesticides (like area fogging) <b>SMEXP_PEST_ENVIRO</b> |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Flea or tick collars <b>SMEXP_FIEA</b>                                |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Pesticide strips <b>SMEXP_PEST_STRIP</b>                              |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Smoke from oil fires <b>SMEXP_SMOKE_OIL</b>                           |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Smoke from burning trash or feces <b>SMEXP_SMOKE_TRASH</b>            |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Vehicle or truck exhaust fumes <b>SMEXP_FUMES_EXHAUST</b>             |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Heater smoke <b>SMEXP_SMOKE_HEATER</b>                                |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | JP8 or other fuels <b>SMEXP_FUELS</b>                                 |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Fog oils (smoke screen) <b>SMEXP_FOG_OILS</b>                         |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Solvents <b>SMEXP_SOLVENTS</b>  |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Paints <b>SMEXP_PAINTS</b>  |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Ionizing radiation <b>SMEXP_RADIATION</b>                             |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Radar/microwaves <b>SMEXP_MICROWAVE</b>                               |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Lasers <b>SMEXP_LASER</b>   |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Loud noises <b>SMEXP_NOISE</b>  |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Excessive vibration <b>SMEXP_VIBRATION</b>                            |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Industrial pollution <b>SMEXP_POLLUTION</b>                           |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Sand/dust <b>SMEXP_SAND</b>   |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Depleted Uranium (If yes, explain) <b>SMEXP_URANIUM</b>               |
| <input type="radio"/>   | <input type="radio"/>   | <input type="radio"/>   | Other exposures <b>SMEXP_OTHER</b>                                    |

**Health Care Provider Only**

SERVICE MEMBER'S SOCIAL SECURITY #

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**Post-Deployment Health Care Provider Review, Interview, and Assessment****Interview****CLHEALTH\_ASSESSMENT**

1. Would you say your health in general is: **CLMED\_PROBLEMS**
- 0 ☐ Excellent    1 ☐ Very Good    2 ☐ Good    3 ☐ Fair    4 ☐ Poor
2. Do you have any medical or dental problems that developed during this deployment? **CLLIGHT\_DUTY** 1 ☐ Yes 0 ☐ No
3. Are you currently on a profile or light duty? **CLMENTAL\_HEALTH** 1 ☐ Yes 0 ☐ No
4. During this deployment have you sought, or do you now intend to seek, counseling or care for your mental health? **CLHEALTH\_CONCERNS** 1 ☐ Yes 0 ☐ No
5. Do you have concerns about possible exposures or events during this deployment that you feel may affect your health? **CLHEALTH\_CONCERNS2** 1 ☐ Yes 0 ☐ No
- Please list concerns: \_\_\_\_\_

6. Do you currently have any questions or concerns about your health? **CLHEALTH\_CONCERNS2** ☐ Yes ☐ No
- Please list concerns: \_\_\_\_\_

**Health Assessment**

After my interview/exam of the service member and review of this form, there is a need for further evaluation as indicated below. (More than one may be noted for patients with multiple problems. Further documentation of the problem evaluation to be placed in the service member's medical record.)

**CLREFERRED**

1 = checked

**REFERRAL INDICATED FOR:**

- |  |   |
|--|---|
| <input type="radio"/> None   | <input type="radio"/> GI <b>CLREF_GI</b>                |
| <input type="radio"/> Cardiac <b>CLREF_CARDIAC</b>                                 | <input type="radio"/> GU <b>CLREF_GU</b>                |
| <input type="radio"/> Combat/Operational Stress Reaction <b>CLREF_COMBAT</b>       | <input type="radio"/> GYN <b>CLREF_GYN</b>              |
| <input type="radio"/> Dental <b>CLREF_DENTAL</b>                                   | <input type="radio"/> Mental Health <b>CLREF_MENTAL</b> |
| <input type="radio"/> Dermatologic <b>CLREF_DERM</b>                               | <input type="radio"/> Neurologic <b>CLREF_NEURO</b>     |
| <input type="radio"/> ENT <b>CLREF_ENT</b>   | <input type="radio"/> Orthopedic <b>CLREF_ORTHO</b>     |
| <input type="radio"/> Eye <b>CLREF_EYE</b>   | <input type="radio"/> Pregnancy <b>CLREF_PREGNANCY</b>  |
| <input type="radio"/> Family Problems <b>CLREF_FAMILY</b>                          | <input type="radio"/> Pulmonary <b>CLREF_PULMONARY</b>  |
| <input type="radio"/> Fatigue, Malaise, Multisystem complaint <b>CLREF_FATIGUE</b> | <input type="radio"/> Other <b>CLREF_OTHER</b>          |
| <input type="radio"/> Audiology <b>CLREF_AUDIOLOGY</b>                             |   |

**EXPOSURE CONCERNS (During deployment):**

- ☐ Environmental
- ☐ Occupational
- ☐ Combat or mission related
- ☐ None
- CLPROVIDER\_EXP\_CONCERNS**

Comments: \_\_\_\_\_

I certify that this review process has been completed.  
 Provider's signature and stamp:

--

This visit is coded by V70.5 \_\_ 6

Date (dd/mm/yyyy)

				/				/				
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**End of Health Review**

**Appendix F: DD Form 2796- January 2008 Version (PDHA)**

**This form must be completed electronically. Handwritten forms will not be accepted.**

**POST-DEPLOYMENT HEALTH ASSESSMENT (PDHA)**

**PRIVACY ACT STATEMENT**

**AUTHORITY:** 10 U.S.C. 136, 1074f, 3013, 5013, 8013 and E.O. 9397.

**PRINCIPAL PURPOSE(S):** To assess your state of health after deployment in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care you may need. The information you provide may result in a referral for additional healthcare that may include medical, dental or behavioral healthcare or diverse community support services.

**ROUTINE USE(S):** In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, to other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment. Responses may be used to guide possible referrals.

**DISCLOSURE:** Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

**INSTRUCTIONS:** Please read each question completely and carefully before entering your response or marking your selection. **YOU ARE ENCOURAGED TO ANSWER EACH QUESTION. ANSWERING THESE QUESTIONS WILL NOT DELAY YOUR RETURN HOME.** Withholding or providing inaccurate information may impair a healthcare provider's ability to identify health problems and refer you to appropriate sources for additional evaluation or treatment. If you do not understand a question, please ask for help.

**DEMOGRAPHICS**

Last Name

First Name

Middle Initial

Social Security Number

Today's Date (dd/mm/yyyy)

**D\_EVENT**

Name of Your Unit during this Deployment **SMUIC**

Date of Birth (dd/mm/yyyy)

Gender **SMSEX**

☐ Male ☐ Female

**SMSERVICE**

**SMYOB**

Service Branch

Component **SMCOMPONENT**

Pay Grade

**SMGRADE**

- 1 ☐ Air Force  
2 ☐ Army  
3 ☐ Coast Guard  
4 ☐ Marine Corps  
5 ☐ Navy  
7 ☐ GS Employee  
6 ☐ Other

- 1 ☐ Active Duty  
2 ☐ National Guard  
3 ☐ Reserves  
4 ☐ Civilian Government Employee  
5 ☐ Other

- 1 ☐ E1  
2 ☐ E2  
3 ☐ E3  
4 ☐ E4  
5 ☐ E5  
6 ☐ E6  
7 ☐ E7  
8 ☐ E8  
9 ☐ E9  
10 ☐ O1  
11 ☐ O2  
12 ☐ O3  
13 ☐ O4  
14 ☐ O5  
15 ☐ O6  
16 ☐ O7  
17 ☐ O8  
18 ☐ O9  
19 ☐ O10

- 4 ☐ W1  
5 ☐ W2  
6 ☐ W3  
7 ☐ W4  
8 ☐ W5  
9 ☐ Other

Date of arrival in theater (dd/mm/yyyy)

**D\_ARRIVAL**

Date of departure from theater (dd/mm/yyyy)

**D\_DEPART**

Name of Operation:

**SMOPERATION**

**Location of Operation.** To what areas were you mainly deployed (land-based operations for more than 30 days)?  
(Please mark all that apply, including the number of months spent at each location.)

- |                                 |                   |                           |                          |
|---------------------------------|-------------------|---------------------------|--------------------------|
| <input type="radio"/> Country 1 | <b>SMCOUNTRY1</b> | Time at location (months) | <b>SMCOUNTRY1 MONTHS</b> |
| <input type="radio"/> Country 2 | <b>SMCOUNTRY2</b> | Time at location (months) | <b>SMCOUNTRY2 MONTHS</b> |
| <input type="radio"/> Country 3 | <b>SMCOUNTRY3</b> | Time at location (months) | <b>SMCOUNTRY3 MONTHS</b> |
| <input type="radio"/> Country 4 | <b>SMCOUNTRY4</b> | Time at location (months) | <b>SMCOUNTRY4 MONTHS</b> |
| <input type="radio"/> Country 5 | <b>SMCOUNTRY5</b> | Time at location (months) | <b>SMCOUNTRY5 MONTHS</b> |

Occupational specialty during this deployment (MOS/AOC, NEC/NOBC, or AFSC): **SMDOD\_POC**

Combat specialty: **SMCOMBAT\_SPECIALTY**

Current Contact Information:

Phone: \_\_\_\_\_  
Cell: \_\_\_\_\_  
DSN: \_\_\_\_\_  
Email: \_\_\_\_\_  
Address: \_\_\_\_\_

Point of Contact who can always reach you:

Name: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number: \_\_\_\_\_

1. Overall, how would you rate your health during the PAST MONTH? **SMHEALTH\_ASSESSMENT**

- 0 ☐ Excellent  
1 ☐ Very Good  
2 ☐ Good  
3 ☐ Fair  
4 ☐ Poor

2. Compared to before this deployment, how would you rate your health in general now? **SMHEALTH\_CHANGENV**

- 0 ☐ Much better now than before I deployed  
1 ☐ Somewhat better now than before I deployed  
2 ☐ About the same as before I deployed  
3 ☐ Somewhat worse now than before I deployed  
4 ☐ Much worse now than before I deployed

3. During the past 4 weeks, how difficult have physical health problems (illness or injury) made it for you to do your work or other regular daily activities?

- 0 ☐ Not difficult at all  
1 ☐ Somewhat difficult  
2 ☐ Very difficult  
3 ☐ Extremely difficult

4. During the past 4 weeks, how difficult have emotional problems (such as feeling depressed or anxious) made it for you to do your work, take care of things at home, or get along with other people?

- 0 ☐ Not difficult at all  
1 ☐ Somewhat difficult  
2 ☐ Very difficult  
3 ☐ Extremely difficult

5. How many times were you seen by a healthcare provider (physician, PA, medic, corpsman, etc.) for a medical problem or concern during this deployment? **SMTIMES\_SEENNV**

6. Did you have to spend one or more nights in a hospital as a patient during this deployment? **SMHOSPITALIZED**

- 0 ☐ No  
1 ☐ Yes. Reason/dates: \_\_\_\_\_

**S A M P L E**

7. Were you wounded, injured, assaulted or otherwise hurt during this deployment? **SMINJURED**

- 0 ☐ No  
1 ☐ Yes

7a. IF YES, are you still having problems related to this event? **SMINJ\_PROB**

- 0 ☐ No  
1 ☐ Yes  
2 ☐ Unsure

8. For any of the following symptoms, please indicate whether you went to see a healthcare provider (physician, PA, medic, corpsman, etc.), were placed on quarters (Qtrs) or given light/limited duty (Profile), and whether you are still bothered by the symptom now. **SICK\_QTR\_STILL**

Symptom	Sick Call?		Qtrs/Profile?		Still Bothered?		Symptom	Sick Call?		Qtrs/Profile?		Still Bothered?	
	0 No	1 Yes	No 0	Yes 1	No 0	Yes 1		No	Yes	No	Yes	No	Yes
Fever <b>SMFEVER_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dizzy, light headed, passed out <b>SMDIZZY_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cough lasting more than 3 weeks <b>SMCOUGH_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Diarrhea <b>SMDIARRHEA_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble breathing <b>SMBREATHING_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vomiting <b>SMVOMIT_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bad headaches <b>SMHEADACHE_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Frequent indigestion/heartburn <b>SMINDIGESTION_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Generally feeling weak <b>SMWEAK_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Problems sleeping or still feeling tired after sleeping <b>SMTIRED_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Muscle aches <b>SMMUSCLE_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Trouble concentrating, easily distracted <b>SMDISTRACTED_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Swollen, stiff or painful joints <b>SMJOINTS_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Forgetful or trouble remembering things <b>SMMEMORY_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Back pain <b>SMBACK_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Hard to make up your mind or make decisions <b>SMDECISIONS_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Numbness or tingling in hands or feet <b>SMNUMB_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Increased irritability <b>SMIRRITABLE_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Trouble hearing <b>SMHEARING_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Skin diseases or rashes <b>SMRASH_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ringing in the ears <b>SMRINGING_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Other (please list): <b>SMOTH_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watery, red eyes <b>SMEYES_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dimming of vision, like the lights were going out <b>SMVISION_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chest pain or pressure <b>SMCHEST_</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number: \_\_\_\_\_

**9.a. During this deployment, did you experience any of the following events? (Mark all that apply)**

- (1) Blast or explosion (IED, RPG, land mine, grenade, etc.) **SMBLAST** ☐ No ☒ Yes
- (2) Vehicular accident/crash (any vehicle, including aircraft) **SMCRASH** ☐ No ☐ Yes
- (3) Fragment wound or bullet wound above your shoulders **SMWOUND** ☐ No ☐ Yes
- (4) Fall **SMFALL** ☐ No ☐ Yes
- (5) Other event (for example, a sports injury to your head). Describe: **SMOTH\_EVENT** ☐ No ☐ Yes

**9.b. Did any of the following happen to you, or were you told happened to you, IMMEDIATELY after any of the event(s) you just noted in question 9.a.?**

- (Mark all that apply)
- (1) Lost consciousness or got "knocked out" **SMKNOCKEDOUT** ☐ No ☐ Yes
- (2) Felt dazed, confused, or "saw stars" **SMDAZED** ☐ No ☐ Yes
- (3) Didn't remember the event **SMREMEMBER** ☐ No ☐ Yes
- (4) Had a concussion **SMCONCUSSION** ☐ No ☐ Yes
- (5) Had a head injury **SMHEADINJ** ☐ No ☐ Yes

**9.c. Did any of the following problems begin or get worse after the event(s) you noted in question 9.a.?**

- (Mark all that apply)
- (1) Memory problems or lapses **SMMEMORY** ☐ No ☐ Yes
- (2) Balance problems or dizziness **SMBALANCE** ☐ No ☐ Yes
- (3) Ringing in the ears **SMRING** ☐ No ☐ Yes
- (4) Sensitivity to bright light **SMSENSITIVE** ☐ No ☐ Yes
- (5) Irritability **SMIRRITABILITY** ☐ No ☐ Yes
- (6) Headaches **SMHEADACHES** ☐ No ☐ Yes
- (7) Sleep problems **SMSLEEP** ☐ No ☐ Yes

**9.d. In the past week, have you had any of the symptoms you indicated in 9.c.?**

- (Mark all that apply)
- (1) Memory problems or lapses **SMMEMORY\_WK** ☐ No ☐ Yes
- (2) Balance problems or dizziness **SMBALANCE\_WK** ☐ No ☐ Yes
- (3) Ringing in the ears **SMRING\_WK** ☐ No ☐ Yes
- (4) Sensitivity to bright light **SMSENSITIVE\_WK** ☐ No ☐ Yes
- (5) Irritability **SMIRRITABILITY\_WK** ☐ No ☐ Yes
- (6) Headaches **SMHEADACHES\_WK** ☐ No ☐ Yes
- (7) Sleep problems **SMSLEEP\_WK** ☐ No ☐ Yes

**10. Did you encounter dead bodies or see people killed or wounded during this deployment? (Mark all that apply)**

- ☐ No ☐ Yes ( ☐ Enemy ☐ Coalition ☐ Civilian ) **SMKILLED\_ENEMY** **SMKILLED\_COALITION** **SMKILLED\_CIVILIAN**

**11. Were you engaged in direct combat where you discharged a weapon?**

- ☐ No ☐ Yes ( ☐ land ☐ sea ☐ air ) **SMWEAPON**

**12. During this deployment, did you ever feel that you were in great danger of being killed?**

- ☐ No ☐ Yes **SMDANGER\_KILLED**

**13. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST MONTH, you ...**

- a. Have had nightmares about it or thought about it when you did not want to? **SMNIGHTMARES** ☐ No ☐ Yes
- b. Tried hard not to think about it or went out of your way to avoid situations that remind you of it? **SMAVOID\_SITUATIONS** ☐ No ☐ Yes
- c. Were constantly on guard, watchful, or easily startled? **SMON\_GUARD** ☐ No ☐ Yes
- d. Felt numb or detached from others, activities, or your surroundings? **SMDETACHED** ☐ No ☐ Yes

**14. Over the PAST MONTH, have you been bothered by the following problems?**

- |  | Not at all              | Few or several days     | More than half the days | Nearly every day        |
|--|-------------------------|-------------------------|-------------------------|-------------------------|
| a. Little interest or pleasure in doing things | <input type="radio"/> 0 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
| b. Feeling down, depressed, or hopeless        | <input type="radio"/> 0 | <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 |
- SMITTLE\_INTERESTNV** **SMFEELING\_DOWNNV**

**15. Alcohol is occasionally available during deployments, e.g., R&R, port call, etc. Prior to deploying or during this deployment:**

- a. Did you use alcohol more than you meant to? **SMETOH** ☐ No ☐ Yes
- b. Have you felt that you wanted to or needed to cut down on your drinking? **SMETOH\_DOWN** ☐ No ☐ Yes
- c. How often do you have a drink containing alcohol? **SMETOH\_FREQ**
- ☐ Never ☐ Monthly or less ☐ 2 to 4 times a month ☐ 2 to 3 times a week ☐ 4 or more times a week
- d. How many drinks containing alcohol do you have on a typical day when you are drinking? **SMETOH\_NUM**
- ☐ 1 or 2 ☐ 3 or 4 ☐ 5 or 6 ☐ 7 to 9 ☐ 10 or more
- e. How often do you have six or more drinks on one occasion? **SMETOH\_SIX**
- ☐ Never ☐ Less than monthly ☐ Monthly ☐ Weekly ☐ Daily

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number: **SMEXP** : **0** **1**

16. Are you worried about your health because you were exposed to: (Mark all that apply)		No	Yes
Animal bites	<b>ANIMAL BITE</b>	<input type="radio"/>	<input type="radio"/>
Animal bodies (dead)	<b>ANIMAL DEAD</b>	<input type="radio"/>	<input type="radio"/>
Chlorine gas	<b>CHLORINE</b>	<input type="radio"/>	<input type="radio"/>
Depleted uranium (If yes, explain)	<b>URANIUMNV</b>	<input type="radio"/>	<input type="radio"/>
Excessive vibration	<b>VIBRATIONNV</b>	<input type="radio"/>	<input type="radio"/>
Fog oils (smoke screen)	<b>FOG OILSNV</b>	<input type="radio"/>	<input type="radio"/>
Garbage	<b>GARBAGE</b>	<input type="radio"/>	<input type="radio"/>
Human blood, body fluids, body parts, or dead bodies	<b>BLOOD</b>	<input type="radio"/>	<input type="radio"/>
Industrial pollution	<b>POLLUTIONNV</b>	<input type="radio"/>	<input type="radio"/>
Insect bites	<b>BITES</b>	<input type="radio"/>	<input type="radio"/>
Ionizing radiation	<b>RADIATIONNV</b>	<input type="radio"/>	<input type="radio"/>
JP8 or other fuels	<b>FUELSNV</b>	<input type="radio"/>	<input type="radio"/>
Lasers	<b>LASERNV</b>	<input type="radio"/>	<input type="radio"/>
Loud noises	<b>NOISENV</b>	<input type="radio"/>	<input type="radio"/>
Paints	<b>PAINTSNV</b>	<input type="radio"/>	<input type="radio"/>
Pesticides	<b>PESTICIDES</b>	<input type="radio"/>	<input type="radio"/>
Radar/Microwaves	<b>MICROWAVENV</b>	<input type="radio"/>	<input type="radio"/>
Sand/dust	<b>SANDNV</b>	<input type="radio"/>	<input type="radio"/>
Smoke from burning trash or feces	<b>SMOKE TRASHNV</b>	<input type="radio"/>	<input type="radio"/>
Smoke from oil fire	<b>SMOKE OILNV</b>	<input type="radio"/>	<input type="radio"/>
Solvents	<b>SOLVENTSNV</b>	<input type="radio"/>	<input type="radio"/>
Tent heater smoke	<b>SMOKE HEATERNV</b>	<input type="radio"/>	<input type="radio"/>
Vehicle or truck exhaust fumes	<b>FUMES EXHAUSTNV</b>	<input type="radio"/>	<input type="radio"/>
Other exposures to toxic chemicals or materials, such as ammonia, nitric acid, etc.: (If yes, explain)	<b>OTHERNV</b>	<input type="radio"/>	<input type="radio"/>

17. Were you exposed to any chemicals or other hazard (industrial, environmental, etc.) that required you to seek immediate medical care? **SMEXP\_CHEMICAL**

☐ No ☐ Yes

18. Did you enter or closely inspect any destroyed military vehicles? **SMDESTROYED\_VEHICLESNV**

☐ No ☐ Yes

19. Do you think you were exposed to any chemical, biological, or radiological warfare agents during this deployment? **SMCBR\_AGENTS**

☐ No ☐ Don't know ☐ Yes, explain with date and location

**0** **2** **1**

20. This question assesses your personal risk for exposure to tuberculosis or other local infectious diseases.

Would you say your INDOOR contact with local or 3rd country nationals was: **SMCONTACT**

☐ None

☐ Minimal

☐ Moderate

☐ Extensive

**1**

**2** (less than 1 hour per week)

**3** (1 or more hours per week, but not daily)

**4** (at least 1 hour per day, every day)

21. Force Health Protection Measures. Please indicate which of the following items you used during this deployment and how often you used them. **SMUSED** :

	1 Daily	2 Most days	3 Some days	4 Never	5 Not available	6 Not required
DEET insect repellent applied to skin	<b>DEET</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pesticide-treated uniforms	<b>PEST</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eye protection (not commercial sunglasses or prescription glasses)	<b>EYE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hearing protection	<b>HEARING</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
N-95 or other respirator (not gas mask)	<b>RESP</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pills to stay awake, like dexedrine	<b>PILLS</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-NBC meds	<b>NBC</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pyridostigmine (nerve agent pill)	<b>NERVE_PILL</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nerve agent antidote injector	<b>NERVE INJ</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seizure/convulsion antidote injector	<b>SEIZURE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
NBC gas mask	<b>MASK</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MOPP over garments	<b>MOPP</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number:

22. Did you receive any vaccinations just before or during this deployment?

- ☐ Smallpox (leaves a scar on the arm) **SMVAC\_SMALLPOX**  
☐ Anthrax **SMVAC\_ANTHRAX**  
☐ Botulism **SMVAC\_BOTULISM**  
☐ Typhoid **SMVAC\_TYPHOID**  
☐ Meningococcal **SMVAC\_MENING**  
☐ Yellow Fever **SMVAC\_YELLOW**  
☐ Other, list: **SMVAC\_OTHER**  
☐ No **SMVAC\_NONE**  
☐ Don't know **SMVAC\_DK**

1=CHECKED

23. Were you told to take medicines to prevent malaria?

- ☐ No ☒ Yes **SMMEDS\_MALARIA**

If YES, please indicate which medicines you took and whether you missed any doses. (Mark all that apply)

Anti-malarial medications <b>SMMEDS :</b>	<b>0</b> Took All Pills
<input type="radio"/> Chloroquine (Aralen®) <b>CHL</b>	<input type="radio"/> No <input checked="" type="radio"/> Yes
<input type="radio"/> Doxycycline (Vibramycin®) <b>DOX</b>	<input type="radio"/> No <input checked="" type="radio"/> Yes
<input type="radio"/> Mefloquine (Lariam®) <b>MEF</b>	<input type="radio"/> No <input checked="" type="radio"/> Yes
<input type="radio"/> Primaquine <b>PRIM</b>	<input type="radio"/> No <input checked="" type="radio"/> Yes
<input type="radio"/> Other : <b>OTH</b>	<input type="radio"/> No <input checked="" type="radio"/> Yes

24. Would you like to schedule a visit with a healthcare provider to further discuss your health concern(s)? **SMREQ\_PROVIDER**

- ☒ No ☐ Yes

25. Are you currently interested in receiving information or assistance for a stress, emotional or alcohol concern? **SMREQ\_STRESS**

- ☒ No ☐ Yes

26. Are you currently interested in receiving assistance for a family or relationship concern?

- ☒ No ☐ Yes

27. Would you like to schedule a visit with a chaplain or a community support counselor?

- ☒ No ☐ Yes  
**SMREQ\_FAMILY**  
**SMREQ\_CHAPLAIN**

S A M P L E

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number: \_\_\_\_\_

**Health Care Provider Only**

**Post-Deployment Health Care Provider Review, Interview, and Assessment**

**1. Do you have any medical or dental problems that developed during this deployment?** **CLMED\_PROBLEMS** 1 0  
 If yes, are the problems still bothering you now? **CLMED\_PROBS\_STILL** 1 0  
☐ Yes ☐ No ☐ Yes ☐ No

**2. Are you currently on a profile (or LIMDU) that restricts your activities (light or limited duty)?** **CLLIGHT\_DUTYNV** 1 0  
 If yes: For what reason? \_\_\_\_\_ ☐ NA  
 Is your condition due to an injury or illness that occurred during the deployment? **CLCOND\_DEPL** 1 0 ☐ Yes ☐ No ☐ NA  
 Did you have similar problems prior to deployment? **CLPROB\_PRIOR** 1 0 ☐ Yes ☐ No ☐ NA  
 If so, did your condition worsen during the deployment? **CLPROB\_WORSE** 1 0 ☐ Yes ☐ No ☐ NA

**3. Ask the following behavioral risk questions. Conduct risk assessment as necessary.** 1 0

a. Over the PAST MONTH, have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way? **CLHURT\_SELF** ☐ Yes ☐ No  
 IF YES, about how often have you been bothered by these thoughts? **CLHURT\_SELF\_FREQ** 0 1 2  
☐ A few days ☐ More than half of the time ☐ Nearly every day

b. Over the PAST MONTH, have you had thoughts or concerns that you might hurt or lose control with someone? **CLCLOSE\_CONTROL** 1 0 2  
☐ Yes ☐ No ☐ Unsure

**4. If member reports YES or UNSURE responses to 3.a. or 3.b., conduct risk assessment.** **CLCURRENT\_RISK** 0 1 2

a. Does member pose a current risk for harm to self or others? **CLOUTCOME** 0 1 2  
☐ No, not a current risk ☐ Yes, poses a current risk ☐ Unsure

b. Outcome of assessment **CLALCOHOLEVPROB** 0 1  
☐ Immediate referral ☐ Routine follow-up referral ☐ Referral not indicated

**5. Alcohol screening result** **CLALCOHOLREF** 1 0  
☐ No evidence of alcohol-related problems  
☐ Potential alcohol problem (positive response to either question 15.a. or 15.b. and/or AUDIT-C (questions 15.c.-e.) score of 4 or more for men or 3 or more for women).  
 Refer to PCM for evaluation. ☐ Yes ☐ No

**6. During this deployment have you sought, or do you now intend to seek, counseling or care for your mental health?** **CLMENTAL\_HEALTH** 1 0  
☐ Yes ☐ No

**7. Traumatic Brain Injury (TBI) risk assessment** **CLTBIEVPROB** 0 1  
☐ No evidence of risk based on responses to questions 9.a. - d.  
☐ Potential TBI with persistent symptoms, based on responses to question 9.d.  
 Refer for additional evaluation. **CLTBIREF** 1 0  
☐ Yes ☐ No

**8. Tuberculosis risk assessment, based on response to question 20.** **CLTBIEVPROB** 1 0  
☐ Minimal risk  
☐ Increased risk  
 Recommend tuberculosis skin testing in 60-90 days **CLTBREF** 1 0  
☐ Yes ☐ No

**9. Depleted Uranium (DU) risk assessment, based on responses to question 16 (DU, Yes) or question 18 (Yes).** **CLDUEVPROB** 1 0  
☐ No evidence of exposure to depleted uranium  
☐ Potential exposure to depleted uranium  
 Refer to PCM for completion of DD Form 2872 and possible 24-hour urinalysis. **CLDUREF** 1 0  
☐ Yes ☐ No

**10. Do you have any other concerns about possible exposures or events during this deployment that you feel may affect your health?** **CLEXPOSURE\_CONCERNS** 1 0  
 Please list your concerns: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**11. Do you currently have any questions or concerns about your health?** **CLHEALTH\_CONCERNS** 1 0  
 Please list your concerns: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number:

### Health Assessment

After my interview/examination of the service member and review of this form, there is a need for further evaluation and follow-up as indicated below. (More than one may be noted for patients with multiple problems. Further documentation of the problem evaluation to be placed in service member's medical record.)

11. Identified Concerns	Minor Concern	Major Concern	Already Under Care		12. Referral Information	Within 24 hours	Within 7 days	Within 30 days
			Yes	No				
<input type="radio"/> Physical Symptom(s) <b>PHYSICAL</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Primary Care, Family Practice <b>PRIMARYNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Exposure Symptom(s) <b>EXPOSURE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Behavioral Health in Primary Care <b>MENTAL_PRIMARYNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Environmental <b>ENVIRO</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Mental Health Specialty Care <b>MENTAL_SPECIALNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Occupational <b>OCCU</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. Other specialty care:			
<input type="radio"/> Combat or mission-related <b>COMBAT</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Audiology <b>AUDIOLOGYNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Depression symptoms <b>DEPRESSION</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Cardiology <b>CARDIACNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> PTSD symptoms <b>PTSD</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dentistry <b>DENTALNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Anger/Aggression <b>ANGER</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dermatology <b>DERMNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Suicidal Ideation <b>SUICIDE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	ENT <b>ENTNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Social/Family Conflict <b>FAMILY</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	GI <b>GINV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Alcohol Use <b>ETOH</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Internal Medicine <b>INTERNAL</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Other: <b>OTHER</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Neurology <b>NEURONV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. Comments:					OB/GYN <b>OBNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Ophthalmology <b>OPH</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Optometry <b>EYENV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Orthopedic <b>ORTHONV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Pulmonology <b>PULMONARYNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Urology <b>UROLOGY</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					e. Case Manager, Care Manager <b>CASE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					f. Substance Abuse Program <b>ABUSE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					g. Health Promotion, Health Education <b>HEALTH_ED</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					h. Chaplain <b>CHAPLAIN</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					i. Family Support, Community Service <b>FAMILYNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					j. Military OneSource <b>ONE_SOURCE</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					k. Other: <b>OTHERNV</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					l. No referral made <b>CLREFERRED</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I certify that this review process has been completed.

Provider's signature and stamp:

This visit is coded by V70.5\_E

**S A M P L E**

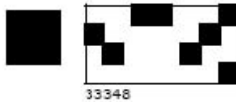
Date (dd/mm/yyyy)

Ancillary Staff/Administrative Section

1=CHECKED

14. Member was provided the following:	15. Referral was made to the following healthcare or support system:
<input type="radio"/> Medical Threat Debrief <b>CLPROV_DEBRIEF</b>	<input type="radio"/> Military Treatment Facility <b>CLSYS_MTF</b>
<input type="radio"/> Health Education and Information <b>CLPROV_HEALTH_ED</b>	<input type="radio"/> Division/Line-based medical resource <b>CLSYS_DIV</b>
<input type="radio"/> Health Care Benefits and Resources Information <b>CLPROV_BENEFIT</b>	<input type="radio"/> VA Medical Center or Community Clinic <b>CLSYS_VA</b>
<input type="radio"/> Appointment Assistance <b>CLPROV_APPT</b>	<input type="radio"/> Vet Center <b>CLSYS_VET</b>
<input type="radio"/> Service member declined to complete form <b>CLDECLINED_FORM</b>	<input type="radio"/> TRICARE Provider <b>CLSYS_TRICARE</b>
<b>CLDECLINED_INTERVIEW</b> declined to complete interview/assessment	<input type="radio"/> Contract Support: <b>CLSYS_CONTRACT</b>
<input type="radio"/> Service member declined referral for services	<input type="radio"/> Community Service: <b>CLSYS_CMNTY</b>
<input type="radio"/> LOD <b>CLPROV_LOD</b> <b>CLDECLINED_REFERRAL</b>	<input type="radio"/> Other: <b>CLSYS_OTHER</b>
<input type="radio"/> Post-deployment blood specimen collected (if required)	<input type="radio"/> None <b>CLSYS_NONE</b>
<input type="radio"/> Other: <b>CLPROV_OTHER</b>	

**Appendix G: DD Form 2900- June 2005 Version (PDHRA)**



# POST-DEPLOYMENT HEALTH REASSESSMENT (PDHRA)

Authority: 10 U.S.C. 136 Chapter 55. 1074f, 3013, 5013, 8013 and E.O. 9397

**Principal Purpose:** To assess your state of health after deployment in support of military operations and to assist military healthcare providers, including behavioral health providers, in identifying present and future medical care needs you may have. The information you provide may result in a referral for additional healthcare that may include behavioral healthcare.

**Routine Use:** To other Federal and State agencies and civilian healthcare providers as necessary in order to provide necessary medical care and treatment. Responses may be used to guide possible referrals.

**Disclosure:** Disclosure is voluntary.

**INSTRUCTIONS:** Please read each question completely and carefully before making your selections. Provide a response for each question. If you do not understand a question, ask the administrator. Please respond based on your **MOST RECENT DEPLOYMENT**.

## Demographics

Last Name		Today's Date (dd/mm/yyyy)		<b>D_EVENT</b>	
<input type="text"/>		<input type="text"/>		<input type="text"/>	
First Name		DOB (dd/mm/yyyy)		<b>YOB</b>	
<input type="text"/>		<input type="text"/>		<input type="text"/>	
Date arrived theater (mm/yyyy)		Date departed theater (mm/yyyy)		Social Security Number	
<input type="text"/>		<input type="text"/>		<input type="text"/>	
<b>D_ARRIVAL</b>		<b>D_DEPART</b>			

<b>SMSEX</b> Gender <input type="radio"/> Male <input type="radio"/> Female	<b>SERVICE</b> Service Branch <input type="radio"/> Air Force <input type="radio"/> Army <input type="radio"/> Navy <input type="radio"/> Marine Corps <input type="radio"/> Coast Guard <input type="radio"/> Other	<b>SMSTATUS_PRIOR</b> Status Prior to Deployment <input type="radio"/> Active Duty <input type="radio"/> Selected Reserves - Reserve - Unit <input type="radio"/> Selected Reserves - Reserve - AGR <input type="radio"/> Selected Reserves - Reserve - IMA <input type="radio"/> Selected Reserves - National Guard - Unit <input type="radio"/> Selected Reserves - National Guard - AGR <input type="radio"/> Ready Reserves - IRR <input type="radio"/> Ready Reserves - ING <input type="radio"/> Civilian Government Employee <input type="radio"/> Other	Pay Grade <input type="radio"/> E1 <input type="radio"/> E2 <input type="radio"/> E3 <input type="radio"/> E4 <input type="radio"/> E5 <input type="radio"/> E6 <input type="radio"/> E7 <input type="radio"/> E8 <input type="radio"/> E9	<b>SMGRADE</b> <input type="radio"/> O01 <input type="radio"/> O02 <input type="radio"/> O03 <input type="radio"/> O04 <input type="radio"/> O05 <input type="radio"/> O06 <input type="radio"/> O07 <input type="radio"/> O08 <input type="radio"/> O09 <input type="radio"/> O10	<input type="radio"/> W1 <input type="radio"/> W2 <input type="radio"/> W3 <input type="radio"/> W4 <input type="radio"/> W5 <input type="radio"/> Other
<b>SMMAR_STAT</b> Marital Status Married=0 Single=1 Other=2 <input type="radio"/> Never Married <input type="radio"/> Married <input type="radio"/> Separated <input type="radio"/> Divorced <input type="radio"/> Widowed					
<b>SMOPERATION_LOCATION</b> Location of Operation <input type="radio"/> Iraq <input type="radio"/> Afghanistan <input type="radio"/> Kuwait <input type="radio"/> Qatar <input checked="" type="radio"/> Bosnia/Kosovo <input type="radio"/> SW Asia - other <input type="radio"/> Africa	<input type="radio"/> South America <input type="radio"/> North America <input type="radio"/> Australia <input type="radio"/> Europe <input type="radio"/> On a ship <input type="radio"/> Other	<b>SMSTATUS_CURRENT2</b> Since return from deployment I have: <input type="radio"/> Maintained/returned to previous status <input type="radio"/> Transitioned to Selected Reserves: <input type="radio"/> Transitioned to Ready Reserves: <input type="radio"/> Retired from Military Service <input type="radio"/> Separated from Military Service			

## Current Contact Information:

Phone:

Cell:

DSN:

Email:

Address:

## Total Deployments in Past 5 Years:

OIF	OEF	Other
<input type="radio"/> 1	<input type="radio"/> 1	<input type="radio"/> 1
<input type="radio"/> 2	<input type="radio"/> 2	<input type="radio"/> 2
<input type="radio"/> 3	<input type="radio"/> 3	<input type="radio"/> 3
<input type="radio"/> 4	<input type="radio"/> 4	<input type="radio"/> 4
<input type="radio"/> 5 or more	<input type="radio"/> 5 or more	<input type="radio"/> 5 or more

**SMOIF\_TOTAL SMOEF\_TOTAL SMOTH\_TOTAL**

1 = checked

## Current Unit of Assignment

**LAST\_DEMOG\_UIC**

## Current Assignment Location

**LAST\_DEMOG\_UNIT\_STATE**

## Point of Contact who can always reach you:

Name:

Phone:

Email:

Mailing Address:

Reset



DD FORM 2900, JUN 2005

ASD(HA) APPROVED

**SMHEALTH\_ASSESSMENT SMHEALTHR (0,1)**

1. Overall, how would you rate your health during the PAST MONTH?

- ☐ Excellent ☐ Very Good ☐ Good ☒ Fair ☐ Poor  
 0 1 2 3 4

2. Compared to before your most recent deployment, how would you rate your health in general now?

- 0 ☐ Much better now than before I deployed  
 1 ☐ Somewhat better now than before I deployed  
 2 ☐ About the same as before I deployed  
 3 ☒ Somewhat worse now than before I deployed  
 4 ☐ Much worse now than before I deployed  
**SMHEALTH\_CHANGE SMHEALTH\_CHR (0,1)**

3. Since you returned from deployment, about how many times have you seen a healthcare provider for any reason, such as in sick call, emergency room, primary care, family doctor, or mental health provider?

- 0 ☐ No visits ☐ 1 visit ☐ 2-3 visits ☒ 4-5 visits ☐ Over 6 visits  
 0 1 2 3 4

4. Since you returned from deployment, have you been hospitalized?

- 1 ☒ Yes ☐ No  
 1 ☐ Yes ☐ No

5. During your deployment, were you wounded, injured, assaulted or otherwise physically hurt?

- IF NO, skip to Question 6.  
 5a. IF YES, are you still having problems related to this wound, assault, or injury?  
 1 ☐ Yes ☐ No ☐ Unsure  
**SMHEALTH\_CONCERNS**  
 6. Other than wounds or injuries, do you currently have a health concern or condition that you feel is related to your deployment?  
 1 ☐ Yes ☐ No ☐ Unsure

IF NO, skip to Question 7.

6a. IF YES, please mark the item(s) that best describe your deployment-related condition or concern: 1 = checked

- |   |  |
|---|--|
| <b>SMCOUGH</b> <input type="radio"/> Chronic cough                            | <b>SMTEARING</b> <input type="radio"/> Redness of eyes with tearing                          |
| <b>SMRUNNY_NOSE</b> <input type="radio"/> Runny nose                          | <b>SMVISION</b> <input type="radio"/> Dimming of vision, like the lights were going out      |
| <b>SMFEVER</b> <input type="radio"/> Fever                                    | <b>SMCHEST_PAIN</b> <input type="radio"/> Chest pain or pressure                             |
| <b>SMWEAKNESS</b> <input type="radio"/> Weakness                              | <b>SMDIZZY</b> <input type="radio"/> Dizziness, fainting, light headedness                   |
| <b>SMHEADACHE</b> <input type="radio"/> Headaches                             | <b>SMBREATHING</b> <input type="radio"/> Difficulty breathing                                |
| <b>SMJOINTS</b> <input type="radio"/> Swollen, stiff or painful joints        | <b>SMDIARRHEA</b> <input type="radio"/> Diarrhea, vomiting, or frequent indigestion          |
| <b>SMBACK_PAIN</b> <input type="radio"/> Back pain                            | <b>SMTIRED</b> <input type="radio"/> Problems sleeping or still feeling tired after sleeping |
| <b>SMMUSCLE</b> <input type="radio"/> Muscle aches                            | <b>SMMEMORY</b> <input type="radio"/> Difficulty remembering                                 |
| <b>SMNUMBNESS</b> <input type="radio"/> Numbness or tingling in hands or feet | <b>SMIRRITABLE</b> <input type="radio"/> Increased irritability                              |
| <b>SMRASH</b> <input type="radio"/> Skin diseases or rashes                   | <b>SMRISK_TAKING</b> <input type="radio"/> Taking more risks such as driving faster          |
| <b>SMRINGING</b> <input type="radio"/> Ringing of the ears                    | <b>SMOTHER_COND</b> <input type="radio"/> Other: _____                                       |

**SMEXPOSURE\_CONCERNS**

7. Do you have any persistent major concerns regarding the health effects of something you believe you may have been exposed to or encountered while deployed?

- ☒ Yes ☐ No  
 1 0

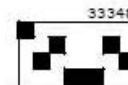
IF NO, skip to Question 8.

7a. IF YES, please mark the item(s) that best describe your concern: 1 = checked

- |   |   |
|---|---|
| <input type="radio"/> DEET insect repellent applied to skin <b>SMEXP_DEET</b>               | <input type="radio"/> Paints <b>SMEXP_PAINTS</b>                              |
| <input type="radio"/> Pesticide-treated uniforms <b>SMEXP_PEST_UNIFORM</b>                  | <input type="radio"/> Radiation <b>SMEXP_RADIATION</b>                        |
| <input type="radio"/> Environmental pesticides (like area fogging) <b>SMEXP_PEST_ENVIRO</b> | <input type="radio"/> Radar/microwave <b>SMEXP_MICROWAVE</b>                  |
| <input type="radio"/> Flea or tick collars <b>SMEXP_FLEA</b>                                | <input type="radio"/> Lasers <b>SMEXP_LASER</b>                               |
| <input type="radio"/> Pesticide strips <b>SMEXP_PEST_STRIP</b>                              | <input type="radio"/> Loud noises <b>SMEXP_NOISE</b>                          |
| <input type="radio"/> Smoke from oil fire <b>SMEXP_SMOKE_OIL</b>                            | <input type="radio"/> Excessive vibration <b>SMEXP_VIBRATION</b>              |
| <input type="radio"/> Smoke from burning trash <b>SMEXP_SMOKE_TRASH</b>                     | <input type="radio"/> Industrial pollution <b>SMEXP_POLLUTION</b>             |
| <input type="radio"/> Vehicle or truck exhaust fumes <b>SMEXP_FUMES_EXHAUST</b>             | <input type="radio"/> Sand/dust <b>SMEXP_SAND</b>                             |
| <input type="radio"/> Tent heater smoke <b>SMEXP_SMOKE_HEATER</b>                           | <input type="radio"/> Blast or motor vehicle accident <b>SMEXP_BLAST</b>      |
| <input type="radio"/> JP8 or other fuels <b>SMEXP_FUELS</b>                                 | <input type="radio"/> Depleted Uranium (if yes, explain) <b>SMEXP_URANIUM</b> |
| <input type="radio"/> Fog oils (smoke screen) <b>SMEXP_FOG_OILS</b>                         | <input type="radio"/> Other: <b>SMEXP_OTHER</b>                               |
| <input type="radio"/> Solvents <b>SMEXP_SOLVENTS</b>  |   |

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Reset



**SMCONFLICTS** **SMCONFLICTSR (0,1)**

8. Since return from your deployment, have you had serious conflicts with your spouse, family members, close friends, or at work that continue to cause you worry or concern? ☐ Yes ☐ No ☐ Unsure  
1 0 2

9. Have you had any experience that was so frightening, horrible, or upsetting that, IN THE PAST MONTH, you ....

**SMNIGHTMARES** 1 ☐ Yes ☐ No

a. Have had any nightmares about it or thought about it when you did not want to

**SMAVOID\_SITUATIONS** 1 ☐ Yes ☐ No

b. Tried hard not to think about it or went out of your way to avoid situations that remind you of it

**SMON\_GUARD** 1 ☐ Yes ☐ No

c. Were constantly on guard, watchful, or easily startled

**SMDETACHED** 1 ☐ Yes ☐ No

d. Felt numb or detached from others, activities, or your surroundings

**SMETOH** 1 ☐ Yes ☐ No

10. a. In the PAST MONTH, did you use alcohol more than you meant to? **SMETOH\_DOWN**

b. In the PAST MONTH, have you felt that you wanted to or needed to cut down on your drinking? 1 ☐ Yes ☐ No

11. Over the PAST MONTH, have you been bothered by the following problems?

	Not at all	Few or several days	More than half the days	Nearly every day
<b>SMLITTLE_INTEREST</b> <b>SMLITTLE_INTERESTR (0,1)</b>	0 <input type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
a. Little interest or pleasure in doing things	0 <input type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
<b>SMFEELINGDOWN</b> <b>SMFEELING_DOWNR (0,1)</b>	0 <input type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
b. Feeling down, depressed, or hopeless	0 <input type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>

**SMDIFFICULTY** **SMDIFFBI (0,1)**

12. If you checked off any problems or concerns on this questionnaire, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

0 ☐ Not difficult at all 1 ☐ Somewhat difficult 2 ☐ Very difficult 3 ☐ Extremely difficult

**SMREQ\_PROVIDER** 1 ☐ Yes ☐ No

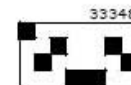
13. Would you like to schedule a visit with a healthcare provider to further discuss your health concern(s)? **SMREQ\_STRESS**

14. Are you currently interested in receiving information or assistance for a stress, emotional or alcohol concern? 1 ☐ Yes ☐ No

**SMREQ\_FAMILY** 1 ☐ Yes ☐ No

15. Are you currently interested in receiving assistance for a family or relationship concern? **SMREQ\_CHAPLAIN**

16. Would you like to schedule a visit with a chaplain or a community support counselor? 1 ☐ Yes ☐ No



**Health Care Provider Only**

SERVICE MEMBER'S SOCIAL SECURITY #

--	--	--	--	--	--	--	--	--	--

**D\_CERT\_PROVIDER**

DATE (dd/mm/yyyy)

--	--	--	--	--	--	--	--	--	--

**Provider Review and Interview**1. Review symptoms and deployment concerns identified on form: **CLPROVIDER\_REVIEW**

- ☐ Confirmed screening results as reported **0** ☐ Screening results modified, amended, clarified during interview: **1**

2. Ask behavioral risk questions **CLHURT\_SELF** **CLHURT\_SELF\_R (0,1)**

- a. Over the PAST MONTH, have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way? **CLHURT\_SELF\_FREQ** **CLHURT\_SELF\_FREQ\_R (0,1)** **1** ☐ Yes **0** ☐ No  
 IF YES, about how often have you been bothered by these thoughts? **0** ☐ Very few days **1** ☐ More than half of the time **2** ☐ Nearly every day
- b. Since return from your deployment, have you had thoughts or concerns that you might hurt or lose control with someone? **CLCLOSE\_CONTROL\_CLOSE\_CONTROL\_R (0,1)** **1** ☐ Yes **0** ☐ No **2** ☐ Unsure

## 3. IF YES OR UNSURE to behavioral risk questions, conduct risk assessment.

- a. Does member pose a current risk for harm to self or others? **CLCURRENT\_RISK** **CLCUR\_RISK\_R (0,1)** **0** ☐ No, not a current risk **1** ☐ Yes, poses a current risk **2** ☐ Unsure, referred
- b. Outcome of assessment **CLOUTCOME** **CLOUTCOME\_R (0,1)** **0** ☐ Immediate referral **1** ☐ Routine follow-up referral **2** ☐ Referral not indicated

## 4. Record additional questions or concerns identified by patient during interview:

**Assessment and Referral:** After my interview with the service member and review of this form, there is a need for further evaluation and follow-up as indicated below. (More than one may be noted for patients with multiple concerns.)

## 5. Identified Concerns

	Minor Concern	Major Concern	Already Under Care
	<b>0</b>	<b>1</b>	<b>1</b> Yes <b>0</b> No
<b>CLCON_PHYSICAL</b> <input type="radio"/> Physical Symptom	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_EXPOSURE</b> <input type="radio"/> Exposure Concern	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_DEPRESSION</b> <input type="radio"/> Depression Symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_PTSD</b> <input type="radio"/> PTSD Symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_ANGER</b> <input type="radio"/> Anger/Aggression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_SUICIDE</b> <input type="radio"/> Suicidal Ideation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_FAMILY</b> <input type="radio"/> Social/Family Conflict	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_ETOH</b> <input type="radio"/> Alcohol Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_OTHER</b> <input type="radio"/> Other:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>CLCON_OTHERS</b> <input type="radio"/> None	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For Major Concerns use **CLMCon**;  
 Binary Concerns use **CLNCon**;  
**1 = checked**

## 7. Comments:

## 8. Provider

a. Name (Last, First)

b. Signature and stamp:

**CLCERT\_PROVIDER**

ICD-9 Code for this  
 visit: V70.5\_6

**Ancillary Staff/Administrative Section**9. Member was provided the following: **1 = checked**

- ☐ Health Education and Information **CLPROV\_HEALTH\_ED**
- ☐ Health Care Benefits and Resources Information **CLPROV\_BENEFIT**
- ☐ Appointment Assistance **CLPROV\_APPT**
- ☐ Service member declined to complete form **CLDECLINED\_FORM**
- ☐ Service member declined to complete interview/assessment **CLDECLINED\_INTERVIEW**
- ☐ Service member declined referral for services **CLDECLINED\_REFERRAL**
- ☐ Other: **CLPROV\_OTHER**

## 10. Referral made to the following healthcare or support system:

- ☐ Military Treatment Facility **CLSYS\_MIF**
- ☐ Division/Line-Based Medical Resource **CLSYS\_DIV**
- ☐ VA Medical Center or Community Clinic **CLSYS\_VA**
- ☐ Vet Center **CLSYS\_VET**
- ☐ TRICARE Provider **CLSYS\_TRICARE**
- ☐ Contract Support: **CLSYS\_CONTRACT**
- ☐ Community Service: **CLSYS\_COMMUNITY**
- ☐ Other: **CLSYS\_OTHER**
- ☐ None

DD FORM 2900, JUN 2005

Reset

ASD(HA) APPROVED



33348

## **Appendix H: DD Form 2900- January 2008 Version (PDHRA)**

**This form must be completed electronically. Handwritten forms will not be accepted.**

**POST-DEPLOYMENT HEALTH RE-ASSESSMENT (PDHRA)**

**PRIVACY ACT STATEMENT**

AUTHORITY: 10 U.S.C. 136, 1074f, 3013, 5013, 8013 and E.O. 9397.

**PRINCIPAL PURPOSE(S):** To assess your state of health after deployment in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care you may need. The information you provide may result in a referral for additional healthcare that may include medical, dental or behavioral healthcare or diverse community support services.

**ROUTINE USE(S):** In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, to other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment.

**DISCLOSURE:** Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

**INSTRUCTIONS:** Please read each question completely and carefully before entering your response or marking your selection. **YOU ARE ENCOURAGED TO ANSWER EACH QUESTION.** Withholding or providing inaccurate information may impair a healthcare provider's ability to identify health problems and refer you to appropriate sources for additional evaluation or treatment. If you do not understand a question, please ask for help. Please respond based on your **MOST RECENT DEPLOYMENT.**

**DEMOGRAPHICS**

Last Name

First Name

Middle Initial

Social Security Number

Date of Birth (dd/mm/yy) **SMYOB**

Today's Date (dd/mm/yy) **D\_EVENT**

Date arrived theater (dd/mm/yy) **D\_ARRIVAL**

Date departed theater (dd/mm/yy) **D\_DEPART**

- SMSEX**  
Gender
- 0 ☐ Male  
1 ☐ Female
- SMSEVICE**  
Service Branch
- 1 ☐ Air Force  
2 ☐ Army  
3 ☐ Navy  
4 ☐ Marine Corps  
5 ☐ Coast Guard  
6 ☐ Civilian Employee  
7 ☐ Other
- SMMAR\_STATNV**  
Marital Status
- 0 ☐ Never Married  
1 ☐ Married  
2 ☐ Separated  
3 ☐ Divorced  
4 ☐ Widowed

- SMSTATUS PRIOR**  
Status Prior to Deployment
- 0 ☐ Active Duty  
1 ☐ Selected Reserves - Reserve - Unit  
2 ☐ Selected Reserves - Reserve - AGR  
3 ☐ Selected Reserves - Reserve - IMA  
4 ☐ Selected Reserves - National Guard - Unit  
5 ☐ Selected Reserves - National Guard - AGR  
6 ☐ Ready Reserves - IRR  
7 ☐ Ready Reserves - ING  
8 ☐ Civilian Government Employee  
9 ☐ Other

- Pay Grade** **SMGRADE**
- 0 ☐ E1  
1 ☐ E2  
2 ☐ E3  
3 ☐ E4  
4 ☐ E5  
5 ☐ E6  
6 ☐ E7  
7 ☐ E8  
8 ☐ E9  
9 ☐ O1  
0 ☐ O2  
1 ☐ O3  
2 ☐ O4  
3 ☐ O5  
4 ☐ O6  
5 ☐ O7  
6 ☐ O8  
7 ☐ O9  
8 ☐ O10  
9 ☐ W1  
0 ☐ W2  
1 ☐ W3  
2 ☐ W4  
3 ☐ W5  
4 ☐ Other

**SMCOUNTRY1-5**  
Location of Operation

To what areas were you mainly deployed (land-based operations more than 30 days)? Please mark all that apply, including the number of months spent at each location.

- 0 ☐ Country 1 \_\_\_\_\_ Months \_\_\_\_\_  
1 ☐ Country 2 \_\_\_\_\_ Months \_\_\_\_\_  
2 ☐ Country 3 \_\_\_\_\_ Months \_\_\_\_\_  
3 ☐ Country 4 \_\_\_\_\_ Months \_\_\_\_\_  
4 ☐ Country 5 \_\_\_\_\_ Months \_\_\_\_\_

**SMSTATUS CURRENTNV**  
Since return from deployment I have:

- 0 ☐ Maintained/returned to previous status  
1 ☐ Transitioned to Selected Reserves  
2 ☐ Transitioned to IRR  
3 ☐ Transitioned to ING  
4 ☐ Retired from Military Service  
5 ☐ Separated from Military Service

**Current Contact Information:**

Phone: \_\_\_\_\_  
Cell: \_\_\_\_\_  
DSN: \_\_\_\_\_  
Email: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_

**SMCOUNTRY1-5 MONTHS**  
Total Deployments in Past 5 Years:

- OIF OEF Other
- 0 ☐ 1 ☐ 1 ☐ 1  
1 ☐ 2 ☐ 2 ☐ 2  
2 ☐ 3 ☐ 3 ☐ 3  
3 ☐ 4 ☐ 4 ☐ 4  
4 ☐ 5 or more ☐ 5 or more ☐ 5 or more

**Current Unit of Assignment**

**SMLAST\_DEMOG\_UIC**

**Current Assignment Location**

**SMLAST\_DEMOG\_UNIT\_STATE**

**Point of Contact who can always reach you:**

Name: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_  
\_\_\_\_\_

**Smoif total Smoef total Smoth total**  
**DD FORM 2900, JAN 2008**

PREVIOUS EDITION IS OBSOLETE.

**This form must be completed electronically. Handwritten forms will not be accepted.**  
**Service Member's Social Security Number:**

<p><b>1. Overall, how would you rate your health during the PAST MONTH?</b> <b>SMHEALTH_ASSESSMENT</b></p> <p>0 <input type="radio"/> Excellent</p> <p>1 <input type="radio"/> Very Good</p> <p>2 <input type="radio"/> Good</p> <p>3 <input type="radio"/> Fair</p> <p>4 <input type="radio"/> Poor</p>	<p><b>2. Compared to before your most recent deployment, how would you rate your health in general now?</b> <b>SMHEALTH_CHANGE</b></p> <p>0 <input type="radio"/> Much better now than before I deployed</p> <p>1 <input type="radio"/> Somewhat better now than before I deployed</p> <p>2 <input type="radio"/> About the same as before I deployed</p> <p>3 <input type="radio"/> Somewhat worse now than before I deployed</p> <p>4 <input type="radio"/> Much worse now than before I deployed</p>																								
<p><b>3. During the past 4 weeks, how difficult have physical health problems (illness or injury) made it for you to do your work or other regular daily activities?</b></p> <p>0 <input type="radio"/> Not difficult at all</p> <p>1 <input type="radio"/> Somewhat difficult</p> <p>2 <input type="radio"/> Very difficult</p> <p>3 <input type="radio"/> Extremely difficult</p> <p><b>SMDIFF_PHY</b></p>	<p><b>4. During the past 4 weeks, how difficult have emotional problems (such as feeling depressed or anxious) made it for you to do your work, take care of things at home, or get along with other people?</b> <b>SMDIFF_EMO</b></p> <p>0 <input type="radio"/> Not difficult at all</p> <p>1 <input type="radio"/> Somewhat difficult</p> <p>2 <input type="radio"/> Very difficult</p> <p>3 <input type="radio"/> Extremely difficult</p>																								
<p><b>5. Since you returned from deployment, about how many times have you seen a healthcare provider for any reason, such as in sick call, emergency room, primary care, family doctor, or mental health provider?</b> <b>SMTIMES_SEEN_AFTER</b></p> <p><input type="radio"/> No visits 0    <input type="radio"/> 1 visit 1    <input type="radio"/> 2-3 visits 2    <input type="radio"/> 4-5 visits 3    <input type="radio"/> 6 or more 4</p>																									
<p><b>6. Since you returned from deployment, have you been hospitalized?</b> <b>SMHOSPITALIZED_AFTER</b>    <input type="radio"/> Yes 1    <input type="radio"/> No 0</p>																									
<p><b>7. During your deployment, were you wounded, injured, assaulted or otherwise physically hurt?</b> <b>SMINJURED</b>    <input type="radio"/> Yes 1    <input type="radio"/> No 0</p> <p>If NO, skip to Question 8.</p>																									
<p><b>7a. If YES, are you still having problems related to this wound, assault, or injury?</b> <b>SMINJ_PROB</b>    <input type="radio"/> Yes 1    <input type="radio"/> No 0    <input type="radio"/> Unsure 2</p>																									
<p><b>8. In addition to wounds or injuries you listed in question 7., do you currently have a health concern or condition that you feel is related to your deployment?</b> <b>SMHEALTH_CONCERNS</b>    <input type="radio"/> Yes 1    <input type="radio"/> No 0    <input type="radio"/> Unsure 2</p> <p>If NO, skip to Question 9.</p>																									
<p><b>8a. If YES, please mark the item(s) that best describe your deployment-related condition or concern:</b></p> <table border="1"> <tr> <td><input type="radio"/> Fever <b>SMFEVER</b></td> <td><input type="radio"/> Dimming of vision, like the lights were going out <b>SMVISION</b></td> </tr> <tr> <td><input type="radio"/> Cough lasting more than 3 weeks <b>SMCOUGHNV</b></td> <td><input type="radio"/> Chest pain or pressure <b>SMCHEST PAIN</b></td> </tr> <tr> <td><input type="radio"/> Trouble breathing <b>SMBREATHINGNV</b></td> <td><input type="radio"/> Dizzy, light headed, passed out <b>SMDIZZYNV</b></td> </tr> <tr> <td><input type="radio"/> Bad headaches <b>SMHEADACHENV</b></td> <td><input type="radio"/> Diarrhea, vomiting, or frequent indigestion/heartburn <b>SMDIARRHEANV</b></td> </tr> <tr> <td><input type="radio"/> Generally feeling weak <b>SMWEAKNESSNV</b></td> <td><input type="radio"/> Problems sleeping or still feeling tired after sleeping <b>SMTIRED</b></td> </tr> <tr> <td><input type="radio"/> Muscle aches <b>SMMUSCLE</b></td> <td><input type="radio"/> Trouble concentrating, easily distracted <b>SMDISTRACTED</b></td> </tr> <tr> <td><input type="radio"/> Swollen, stiff or painful joints <b>SMJOINTS</b></td> <td><input type="radio"/> Forgetful or trouble remembering things <b>SMMEMORYNV</b></td> </tr> <tr> <td><input type="radio"/> Back pain <b>SMBACK PAIN</b></td> <td><input type="radio"/> Hard to make up your mind or make decisions <b>SMDECISIONS</b></td> </tr> <tr> <td><input type="radio"/> Numbness or tingling in hands or feet <b>SMNUMBNESS</b></td> <td><input type="radio"/> Increased irritability <b>SMIRRITABLE</b></td> </tr> <tr> <td><input type="radio"/> Trouble hearing <b>SMHEARING</b></td> <td><input type="radio"/> Taking more risks such as driving faster <b>SMRISK_TAKING</b></td> </tr> <tr> <td><input type="radio"/> Ringing in the ears <b>SMRINGINGNV</b></td> <td><input type="radio"/> Skin diseases or rashes <b>SMRASH</b></td> </tr> <tr> <td><input type="radio"/> Watery, red eyes <b>SMTEARINGNV</b></td> <td><input type="radio"/> Other (please list): <b>SMOTHER_COND</b></td> </tr> </table>		<input type="radio"/> Fever <b>SMFEVER</b>	<input type="radio"/> Dimming of vision, like the lights were going out <b>SMVISION</b>	<input type="radio"/> Cough lasting more than 3 weeks <b>SMCOUGHNV</b>	<input type="radio"/> Chest pain or pressure <b>SMCHEST PAIN</b>	<input type="radio"/> Trouble breathing <b>SMBREATHINGNV</b>	<input type="radio"/> Dizzy, light headed, passed out <b>SMDIZZYNV</b>	<input type="radio"/> Bad headaches <b>SMHEADACHENV</b>	<input type="radio"/> Diarrhea, vomiting, or frequent indigestion/heartburn <b>SMDIARRHEANV</b>	<input type="radio"/> Generally feeling weak <b>SMWEAKNESSNV</b>	<input type="radio"/> Problems sleeping or still feeling tired after sleeping <b>SMTIRED</b>	<input type="radio"/> Muscle aches <b>SMMUSCLE</b>	<input type="radio"/> Trouble concentrating, easily distracted <b>SMDISTRACTED</b>	<input type="radio"/> Swollen, stiff or painful joints <b>SMJOINTS</b>	<input type="radio"/> Forgetful or trouble remembering things <b>SMMEMORYNV</b>	<input type="radio"/> Back pain <b>SMBACK PAIN</b>	<input type="radio"/> Hard to make up your mind or make decisions <b>SMDECISIONS</b>	<input type="radio"/> Numbness or tingling in hands or feet <b>SMNUMBNESS</b>	<input type="radio"/> Increased irritability <b>SMIRRITABLE</b>	<input type="radio"/> Trouble hearing <b>SMHEARING</b>	<input type="radio"/> Taking more risks such as driving faster <b>SMRISK_TAKING</b>	<input type="radio"/> Ringing in the ears <b>SMRINGINGNV</b>	<input type="radio"/> Skin diseases or rashes <b>SMRASH</b>	<input type="radio"/> Watery, red eyes <b>SMTEARINGNV</b>	<input type="radio"/> Other (please list): <b>SMOTHER_COND</b>
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<input type="radio"/> Watery, red eyes <b>SMTEARINGNV</b>	<input type="radio"/> Other (please list): <b>SMOTHER_COND</b>																								

1 = CHECKED

SAMPLE

<p><b>9a. During this deployment, did you experience any of the following events? (Mark all that apply)</b></p> <p>(1) Blast or explosion (IED, RPG, land mine, grenade, etc.) <b>SMBLAST</b>    Yes 1    No 0</p> <p>(2) Vehicular accident/crash (any vehicle, including aircraft) <b>SMCRASH</b>    <input type="radio"/>    <input type="radio"/></p> <p>(3) Fragment wound or bullet wound above your shoulders <b>SMWOUND</b>    <input type="radio"/>    <input type="radio"/></p> <p>(4) Fall <b>SMFALL</b>    <input type="radio"/>    <input type="radio"/></p> <p>(5) Other event (for example, a sports injury to your head). Describe: <b>SMOTH_EVENT</b>    <input type="radio"/>    <input type="radio"/></p>	<p><b>9b. Did any of the following happen to you, or were you told happened to you, IMMEDIATELY after any of the event(s) you just noted in question 9a.? (Mark all that apply)</b></p> <p>(1) Lost consciousness or got "knocked out" <b>SMKNOCKEDOUT</b>    Yes 1    No 0</p> <p>(2) Felt dazed, confused, or "saw stars" <b>SMDAZED</b>    <input type="radio"/>    <input type="radio"/></p> <p>(3) Didn't remember the event <b>SMREMEMBER</b>    <input type="radio"/>    <input type="radio"/></p> <p>(4) Had a concussion <b>SMCONCUSSION</b>    <input type="radio"/>    <input type="radio"/></p> <p>(5) Had a head injury <b>SMHEADINJ</b>    <input type="radio"/>    <input type="radio"/></p>
<p><b>c. Did any of the following problems begin or get worse after the event(s) you noted in question 9a.? (Mark all that apply)</b></p> <p>(1) Memory problems or lapses <b>SMMEM_PROB</b>    Yes 1    No 0</p> <p>(2) Balance problems or dizziness <b>SMBALANCE</b>    <input type="radio"/>    <input type="radio"/></p> <p>(3) Ringing in the ears <b>SMRING</b>    <input type="radio"/>    <input type="radio"/></p> <p>(4) Sensitivity to bright light <b>SMSENSITIVE</b>    <input type="radio"/>    <input type="radio"/></p> <p>(5) Irritability <b>SMIRRITABILITY</b>    <input type="radio"/>    <input type="radio"/></p> <p>(6) Headaches <b>SMHEADACHES</b>    <input type="radio"/>    <input type="radio"/></p> <p>(7) Sleep problems <b>SMSLEEP</b>    <input type="radio"/>    <input type="radio"/></p>	<p><b>d. In the past week, have you had any of the symptoms you indicated in 9c.? (Mark all that apply)</b></p> <p>(1) Memory problems or lapses <b>SMMEM_PROB_WK</b>    Yes 1    No 0</p> <p>(2) Balance problems or dizziness <b>SMBALANCE_WK</b>    <input type="radio"/>    <input type="radio"/></p> <p>(3) Ringing in the ears <b>SMRING_WK</b>    <input type="radio"/>    <input type="radio"/></p> <p>(4) Sensitivity to bright light <b>SMSENSITIVE_WK</b>    <input type="radio"/>    <input type="radio"/></p> <p>(5) Irritability <b>SMIRRITABILITY_WK</b>    <input type="radio"/>    <input type="radio"/></p> <p>(6) Headaches <b>SMHEADACHES_WK</b>    <input type="radio"/>    <input type="radio"/></p> <p>(7) Sleep problems <b>SMSLEEP_WK</b>    <input type="radio"/>    <input type="radio"/></p>

**This form must be completed electronically. Handwritten forms will not be accepted.**

Service Member's Social Security Number:

10. Do you have any persistent major concerns regarding the health effects of something you believe you may have been exposed to or encountered while deployed?

<sup>1</sup> Yes <sup>0</sup> No

If NO, skip to question 11. **SMEXPPOSURE CONCERNS**

10a. If YES, please mark the item(s) that best describe your concern:

<input type="radio"/> Animal bites <b>SMEXP ANIMAL BITE</b>	<input type="radio"/> Loud noises <b>SMEXP_NOISE</b>
<input type="radio"/> Animal bodies (dead) <b>SMEXP ANIMAL_DEAD</b>	<input type="radio"/> Paints <b>SMEXP PAINT</b>
<input type="radio"/> Chlorine gas <b>SMEXP CHLORINE</b>	<input type="radio"/> Pesticides <b>SMEXP_PESTICIDES</b>
<input type="radio"/> Depleted uranium (If yes, explain) <b>SMEXP_URANIUM</b>	<input type="radio"/> Radar/Microwaves <b>SMEXP_MICROWAVE</b>
<input type="radio"/> Excessive vibration <b>SMEXP_VIBRATION</b>	<input type="radio"/> Sand/dust <b>SMEXP SAND</b>
<input type="radio"/> Fog oils (smoke screen) <b>SMEXP_FOG_OILS</b>	<input type="radio"/> Smoke from burning trash or feces <b>SMEXP_SMOKE_TRASH</b>
<input type="radio"/> Garbage <b>SMEXP_GARBAGE</b>	<input type="radio"/> Smoke from oil fire <b>SMEXP_SMOKE_OIL</b>
<input type="radio"/> Human blood, body fluids, body parts, or dead bodies <b>SMEXP_BLOOD</b>	<input type="radio"/> Solvents <b>SMEXP SOLVENTS</b>
<input type="radio"/> Industrial pollution <b>SMEXP POLLUTION</b>	<input type="radio"/> Tent heater smoke <b>SMEXP_SMOKE_HEATER</b>
<input type="radio"/> Insect bites <b>SMEXP BITES</b>	<input type="radio"/> Vehicle or truck exhaust fumes <b>SMEXP_FUMES_EXHAUST</b>
<input type="radio"/> Ionizing radiation <b>SMEXP_RADIATION</b>	<input type="radio"/> Other exposures to toxic chemicals or materials, such as ammonia, nitric acid, etc.: (If yes, explain) <b>SMEXP_OTHER</b>
<input type="radio"/> JP8 or other fuels <b>SMEXP_FUELS</b>	
<input type="radio"/> Lasers <b>SMEXP LASER</b>	

11. Since return from your deployment, have you had serious conflicts with your spouse, family members, close friends, or at work that continue to cause you worry or concern?

<sup>1</sup> Yes <sup>0</sup> No <sup>2</sup> Unsure

12. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST MONTH, you ...

- a. Have had nightmares about it or thought about it when you did not want to? **SMNIGHTMARES** <sup>1</sup> Yes <sup>0</sup> No
- b. Tried hard not to think about it or went out of your way to avoid situations that remind you of it? <sup>1</sup> Yes <sup>0</sup> No
- c. Were constantly on guard, watchful, or easily startled? **SMON\_GUARD** <sup>1</sup> Yes <sup>0</sup> No
- d. Felt numb or detached from others, activities, or your surroundings? **SMDETACHED** <sup>1</sup> Yes <sup>0</sup> No

- 13a. In the PAST MONTH, Did you use alcohol more than you meant to? **SMETOH**

<sup>1</sup> Yes <sup>0</sup> No

- b. In the PAST MONTH, have you felt that you wanted to or needed to cut down on your drinking?

<sup>1</sup> Yes <sup>0</sup> No

- c. How often do you have a drink containing alcohol? **SMETOH\_FREQ**
- <sup>0</sup> Never <sup>1</sup> Monthly or less <sup>2</sup> 2 to 4 times a month <sup>3</sup> 2 to 3 times a week <sup>4</sup> 4 or more times a week

- d. How many drinks containing alcohol do you have on a typical day when you are drinking? **SMETOH\_NUM**
- <sup>0</sup> 1 or 2 <sup>1</sup> 3 or 4 <sup>2</sup> 5 or 6 <sup>3</sup> 7 to 9 <sup>4</sup> 10 or more

- e. How often do you have six or more drinks on one occasion? **SMETOH\_SIX**
- <sup>0</sup> Never <sup>1</sup> Less than monthly <sup>2</sup> Monthly <sup>3</sup> Weekly <sup>4</sup> Daily

14. Over the PAST MONTH, have you been bothered by the following problems?

- a. Little interest or pleasure in doing things **SMLITTLE\_INTEREST** <sup>0</sup> Not at all <sup>1</sup> Few or several days <sup>2</sup> More than half the days <sup>3</sup> Nearly every day
- b. Feeling down, depressed, or hopeless **SMFEELING\_DOWN** <sup>0</sup> Not at all <sup>1</sup> Few or several days <sup>2</sup> More than half the days <sup>3</sup> Nearly every day

15. Would you like to schedule a visit with a healthcare provider to further discuss your health concern(s)? **SMREQ\_PROVIDER**

<sup>1</sup> Yes <sup>0</sup> No

16. Are you currently interested in receiving information or assistance for a stress, emotional or alcohol concern? **SMREQ\_STRESS**

<sup>1</sup> Yes <sup>0</sup> No

17. Are you currently interested in receiving assistance for a family or relationship concern?

<sup>1</sup> Yes <sup>0</sup> No

18. Would you like to schedule a visit with a chaplain or a community support counselor?

<sup>1</sup> Yes <sup>0</sup> No

**SMREQ\_CHAPLAIN**





## **Appendix I: Secondary Analysis Data Sources**

The Defense Medical Surveillance System (DMSS) provided a sample of de-identified records consisting of DD Form 2796 (January 2008 version and April 2003 version; Appendices F and E, respectively), DD Form 2900 (January 2008 version and June 2005 version, Appendices H and G, respectively), and Health Care Encounters (HCE) for all Branches and Components. The majority of analyses were conducted using the most recent (2008) versions of the DD Forms 2796 and 2900 and the corresponding health care records, and these are the data described in this chapter. Descriptions of chapter-specific data sets, including the older versions, can be found in the relevant chapters.

Some data that were not available on the forms were extracted from the Defense Enrollment Eligibility Reporting System (DEERS) database. These data were linked to the DD Form 2796 and the DD Form 2900 records received by Vanderbilt University (VU), and included education level, Component at form completion, race and ethnicity, and unit identification code.

### **DD Form 2796**

The DD Form 2796 (January 2008 version) or Post-Deployment Health Assessment (PDHA) data set consisted of forms completed between December 2, 2007 and March 15, 2009. A total of 317,142 separate de-identified records were received. See Appendix H for a copy of the January 2008 PDHA.

Prior to analysis, the DD2796 data set was examined for missing data and accuracy of data entry. There were no exact duplications of records, although some SMs had multiple records for the same and different deployments. Records were excluded if

- key variables were missing, including date departed theater, date of form completion, Service Branch, and Component
- the date of completion was before December 1, 2007 or after March 15, 2009
- Coast Guard was indicated as the Service Branch

Records were excluded when the date of completion was before December 1, 2007 because the completion date was likely incorrect, as the January 2008 version had not yet been implemented. Records were also excluded when the date of completion was after March 15, 2009. Since VU only requested data through March 15, 2009, it was assumed that later completion dates were errors in data entry and would produce erroneous results in analysis when taking date of completion into account. The final data set included 298,650 records.

Additional data preparation was conducted for certain analyses. For the purpose of descriptive statistics (see Appendices M and N) and psychometric analyses (see Appendix L), a single record was kept for each individual who remained after the data were prepared for analysis. If an SM had multiple records, it was determined whether the forms belonged to the same deployment - defined as deployment dates on forms within 90 days of each other. If the forms were from the same deployment, a record was randomly selected to create a single record per SM. If an SM had multiple deployments, the record consistent with the earliest deployment was selected, and if there were multiple records for the earliest deployment, one was randomly selected. Table I.1 below presents the number of records removed by reason.

**Table I. 1. DD Form 2796 records removed to create final data set for analysis**

Reason	Number of records removed
Coast Guard as Service Branch	344
Multiple Records per SM*	43,462
Missing or out of range key variables**	18,148
<b>Total removed for any reason</b>	<b>61,954</b>

*\*Multiple records were only removed in the creation of the data set used for psychometrics. All records were kept for the creation of the data set for Chapter 5, which is the only chapter that extensively analyzes the PDHA.*

*\*\*Includes date departed theater, date of event, Service Branch, and Component*

The final data set for reporting descriptive statistics and conducting psychometric analyses included 255,188 records. Furthermore, for psychometric analysis, 10% of the records were randomly selected from the larger sample.

### **DD Form 2900**

The DD Form 2900, or Post-Deployment Health Reassessment (PDHRA) data set consisted of forms completed between December, 2007 and March 15, 2009. A total of 256,001 separate de-identified records were received.

Prior to analysis, the DD Form 2900 data set was examined for missing data and accuracy of data entry. There were no exact duplications of records, although some SMs had multiple records for different deployments. Records were excluded if

- key variables were missing, including date departed theater, date of form completion, Service Branch, and Component
- the date of completion was before December, 2007 or after March 15, 2009
- Coast Guard was indicated as the Service Branch.

For the purpose of this report (except in Chapter 9 where multiple forms were a focus of analyses), a single record was included in the final data set for each individual who remained after these data were prepared of analysis. If SMs had multiple records, it was determined whether the forms belonged to the same deployment, defined as deployment dates on forms within 90 days of each other. If an SM had multiple deployments, the record consistent with the earliest deployment was selected, and if there were multiple records for the earliest deployment, one was randomly selected. Table I.2 below presents the number of records removed by reason.

**Table I. 2. DD Form 2900 records removed to create final data set for analysis**

Reason	Number of records removed
Coast Guard as Service Branch	66
Multiple Records per SM	2,895
Missing or out of range key variables*	1,951
<b>Total removed for any reason</b>	<b>4,912</b>

*\*Includes date departed theater, date of event, Service Branch, and Component*

The final data set for the secondary analysis was based on 251,089 records.

## **Deployment Location**

For this report, only SMs who were deployed to Iraq and Afghanistan were included in analysis. See Appendix M for descriptive statistics for every item on the PDHA and PDHRA for the following locations: Iraq, Afghanistan, Both Iraq and Afghanistan, Kuwait, Qatar, and all other locations. For descriptives on every item on the PDHA and PDHRA by Branch and Component for SMs who deployed to Iraq or Afghanistan, see Appendix N.

## **Health Care Encounters**

The Health Care Encounters (HCE) data set consisted of descriptions of all HCE for SMs who received healthcare through TRICARE or military treatment facilities (MTFs) from January 1, 2006 until March 15, 2009. Because only TRICARE or MTF HCEs were included, this data set includes only Active Duty SMs; Reserve and National Guard SMs typically receive health care at private facilities or through the Veterans Affairs health care system. There were limited data on HCE for Reserve and National Guard SMs, but these data were excluded for consistency in analysis.

Data elements included date(s) of encounter, date of admission and discharge, service Clinician ID or name, setting of encounter, ICD-9 codes (diagnoses), and CPT codes (type of service provided). A total of 21,166,398 records were received (each encounter is one record; individual SMs have multiple encounters).

For this report, only the number of visits was used in analysis; healthcare Clinician information, diagnoses, and procedures were not examined. The number of encounters 6 weeks before and 6 weeks after the PDHRA were counted. The number of visits between the PDHA and PDHRA (when a match was present- see Chapter 5) was also counted. If the date of a health care encounter coincided with the date of the PDHA or PDHRA, the ICD-9 diagnosis code was examined to determine whether the encounter could be identified as the completion of the PDHA or PDHRA, or was in fact an actual health care encounter. If the ICD-9 code was V70.5 (the code that should be used to indicate completion of the PDHA or PDHRA), then the encounter was not considered in the calculation of the number of visits.

## **Combat Exposure**

An important SM characteristic that is not available on the PDHRA is combat exposure. In order to consider combat exposure in analysis, three questions from the primary PDHRA data set for the April 2003 and January 2008 versions of the PDHA when a match could be made. The questions were: “Did you encounter dead bodies or see people killed or wounded during this deployment?”; “Were you engaged in direct combat where you discharged a weapon?”; “During this deployment, did you ever feel that you were in great danger of being killed?” The link was created by matching SMs’ PDHRAs to their PDHAs when the date of departures were within 90 days of each other and the date of completion of the PDHRA was no earlier than the date of completion of the PDHA form. If more than 1 PDHA corresponded to a PDHRA, then 1 PDHA was randomly selected in order to create a 1-to-1 match for each SM. Combat exposure information was linked to 143,248 (73.4%) SMs’ PDHRAs. Table I.3 below presents descriptives on the combat exposure variable. Combat exposure was missing if a match to a

PDHA was made, but the SM did not respond to the questions. Combat exposure was not indicated when the SM answered ‘no’ to all 3 questions. Combat exposure was indicated when the SM answered ‘yes’ to at least 1 of the 3 questions.

**Table I. 3. Percentage of SMs with perceived combat exposure available (i.e., not missing) and endorsed**

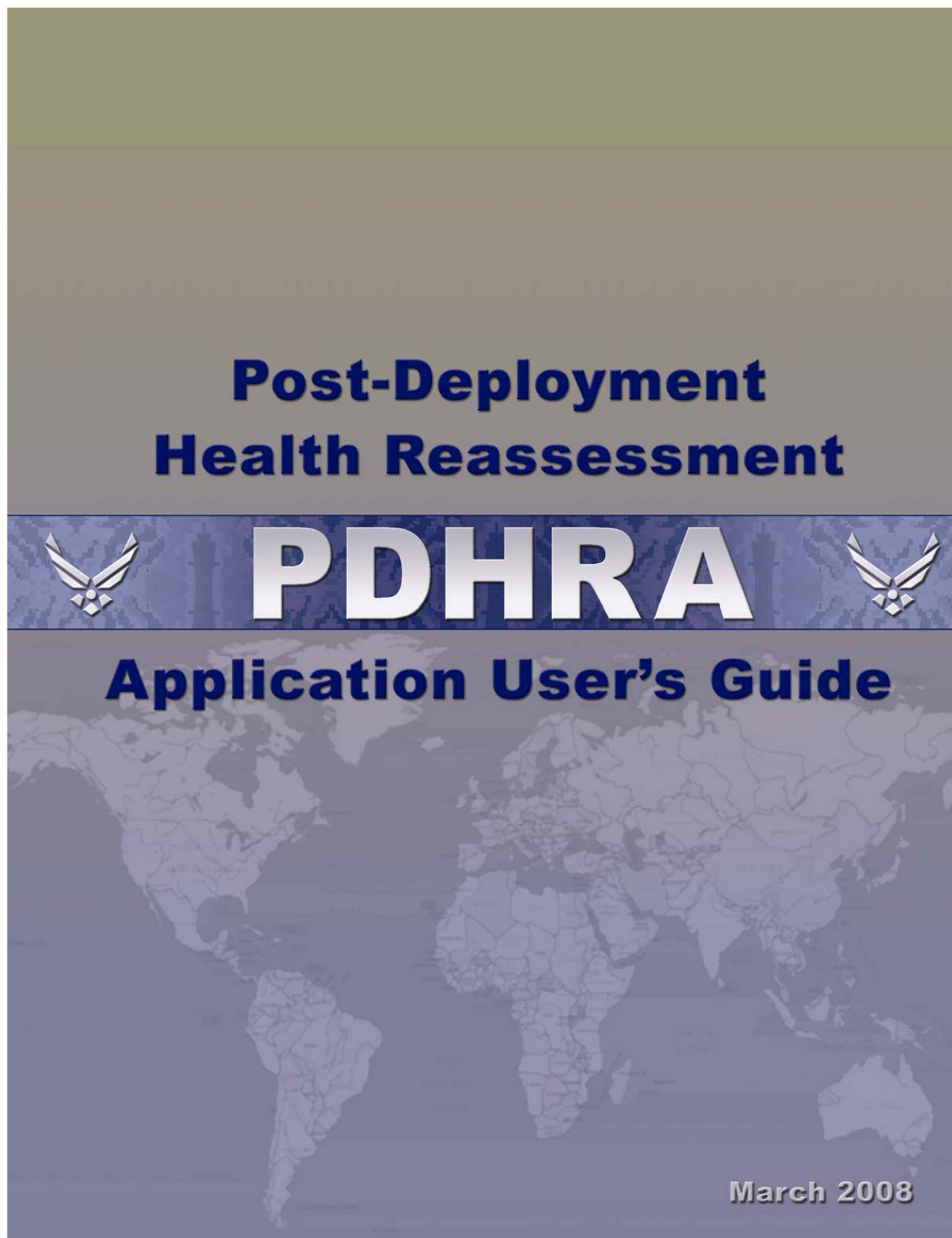
	SMs deployed to OIF/OEF	
	N	Percent
No match to PDHA	50,459	25.8 %
Combat exposure missing	1,555	0.8%
Combat exposure indicated	75,632	38.7 %
No combat exposure indicated	6,7616	34.6 %

### **Linking Data Elements: Creation of a Unique Study ID**

All records were assigned a unique study id prior to Vanderbilt receiving the data. The study id was based on social security number and was assigned by the individual at DoD who provided the data to Vanderbilt. The study id was used to link the PDHA, PDHRA, and HCE data. That is, the same study id identified records corresponding to the same individual in each data set, but since all identifying information was removed from the data, individuals were not identifiable by Vanderbilt.

The study ID was also used to link data elements described in other chapters (e.g., the SM survey, Chapter 6) to the PDHA, PDHRA, and HCE data sets. In all cases the link was created by DoD so that individuals were not identifiable to Vanderbilt.

## **Appendix J: Air Force PDHRA Application User's Guide**



The contract hires may:

- ◆ Work in the LSSC providing specialty behavioral healthcare, allowing the ADAF personnel to function as BHCs.
- ◆ Serve in the role of PDHRA Monitor, however please note that this is not required. Their primary purpose is to assist with the clinical management of positive PDHRAs and other behavioral health needs of all MTF enrollees.

### **LSSC**

For MTFs with a contract PDHRA behavioral health provider, the LSSC will refer patients with positive behavioral health PDHRAs to the BHC in primary care.

For all other MTFs, the PCE and LSSC flight chiefs, under the direction of the SGH will devise local policy on how to process PDHRAs with behavioral health concerns only.

PDHRAs that are positive for physical health concerns only or both physical and behavioral health concerns must first be evaluated by the PCM Team **NOT** the LSSC or BHC.

## **■ PDHRA Results**

### **Negative PDHRAs**

Negative PDHRAs can be batch printed and placed in members' medical records. Negative PDHRAs require no further follow-up.

### **Positive PDHRAs**

The web-based PDHRA application has been designed to identify certain responses as positives. A positive PDHRA is defined as an endorsement of any of the items noted on pp 12-13 of this document.

Supplementary question sets will be offered if members respond positively to depression questions, alcohol questions, or PTSD questions, as follows:

- On question 12, if members answer positively to any of the 4 response options, they will be offered the opportunity to complete the supplementary PCL-M.

- On question 13, if members answer positively to either 13a or 13 b, or if their scores<sup>1</sup> for 13c + 13d + 13e are  $\geq 4$  for men or  $\geq 3$  for women, then they will be offered the opportunity to complete the supplementary AUDIT.
- On question 14, if members answer “more than half the days” or “nearly every day” for either question 14a or 14 b, they will be offered the opportunity to complete the Modified Patient Health Questionnaire-9 (PHQ-9).

Positives are categorized as being either BEHAVIORAL HEALTH or PHYSICAL. The following shows how each of the items are categorized, if positive:

<u>Positive Behavioral Health</u>	<u>Positive Physical</u>
#4 (somewhat, very, extremely)	#1 (fair or poor),
#11 ( yes or unsure)	#2 (somewhat or much worse)
#12 ( yes for any symptom)	#3 ( somewhat, very, extremely)
#13 (yes for a or b; <u>or</u> if c + d + e = $\geq 4$ for men or $\geq 3$ for women)	#5 (4-5 visits; or 6 or more visits)
#14 ( if more than half the days or nearly every day for either a or b)	#6 (yes)
#15 (yes)	#7a ( yes or unsure)
#16 (yes)	#8 (yes or unsure)
#17 (yes)	#9d (yes for any symptom)
#18 (yes)	#10 (yes)

Members with positive PDHRAs will need appropriate follow-up at the MTF, usually with their PCEs. A credentialed healthcare provider must complete page 4 of the PDHRA DD Form 2900. The form must be completed within PIMR or through the Air Force PDHRA provider website to enable its required electronic submittal to the Army Medical Surveillance Agency (AMSA). The PDHRA UMs will contact an MTF if a required page 4 has not been completed within 30 days of the time a member completed the initial part of the form.

<sup>1</sup> The score for each question ranges from 0 to 4, with responses reflecting less frequent drinking and fewer drinks receiving lower scores.<sup>7</sup>

Depending on members' responses on the PDHRA, they may be asked to complete additional question sets in order to help providers fully assess symptoms. These questions may refer to substance use, post-traumatic stress disorder (PTSD), mood, and overall functioning. These questions come from the Alcohol Use Disorders Identification Test (AUDIT), the PTSD Checklist-Military Version (PCL-M), and the Modified Patient Health Questionnaire (PHQ-9). Responses to additional questions are printed automatically with the PDHRA form for provider review. Scoring information for each additional questionnaire is provided in the printout. Directions for scoring the PHQ-9 can be found in the Additional Question Sets section of this document.

The SGH is responsible for ensuring that the appropriate action is taken for positive PDHRAs. Appropriate clinical follow-up on positive PDHRAs should be based on prevailing clinical standards of care.

A positive PDHRA does not automatically require an in-person follow-up. Sometimes a positive PDHRA simply reflects a health concern that already has been appropriately addressed. These cases should be noted on page 4, and no further action is necessary, other than questions 1 and 2. In some cases, a phone call may be adequate to clarify the nature of the concern and to determine if further action is needed.

For all positive PDHRAs, the minimum requirement is to document on page 4 (see page 13) that a clinical assessment took place, along with the rationale for action or lack of further action. All patients with a positive PDHRA will be contacted. MTF personnel must follow local policies and guidelines for contacting patients for follow-up and addressing appointment no-show issues. MTF personnel are highly encouraged to use the patient's chain of command to address follow-up and no-show issues. Unit first sergeants are a valuable resource; they are extremely helpful in supporting the MTF in locating ADAF patients and helping correct no-show and non-compliance issues.

PDHRAs should only be closed out when the service member has been contacted, and the appropriate assessment has been documented. Page 4 should not be closed out for reasons of expediency or convenience.

In cases in which a member's responses on the PDHRA are judged by the clinician to be of greater than minimal risk – and the ADAF member resists further evaluation ( e.g., doesn't return calls or other contact attempts, or verbally refuses further evaluation) – providers have the following options:

- ◆ Consult with a behavioral health provider on how best to proceed if behavioral health concerns were endorsed.
- ◆ Give the individual the choice of either cooperating with further evaluation or the provider can choose one or more of the following:
  - a. Discuss the risks and alternatives both medically and militarily to resisting further evaluation and appropriately document the issues discussed.
  - b. Put the individual on a profile pending further evaluation.
  - c. Contact the member's unit commander to inform him or her of unresolved medical or fitness for duty concerns if the concern is sufficient to warrant a Command Direct Evaluation (CDE).

## POST-DEPLOYMENT HEALTH RE-ASSESSMENT (PDHRA)

## PRIVACY ACT STATEMENT

**AUTHORITY:** 10 U.S.C. 136, 1074f, 3013, 5013, 8013 and E.O. 9397.

**PRINCIPAL PURPOSE(S):** To assess your state of health after deployment in support of military operations and to assist military healthcare providers in identifying and providing present and future medical care you may need. The information you provide may result in a referral for additional healthcare that may include medical, dental or behavioral healthcare or diverse community support services.

**ROUTINE USE(S):** In addition to those disclosures generally permitted under 5 U.S.C. 552a(b) of the Privacy Act, to other Federal and State agencies and civilian healthcare providers, as necessary, in order to provide necessary medical care and treatment.

**DISCLOSURE:** Voluntary. If not provided, healthcare WILL BE furnished, but comprehensive care may not be possible.

**INSTRUCTIONS:** Please read each question completely and carefully before entering your response or marking your selection. **YOU ARE ENCOURAGED TO ANSWER EACH QUESTION.** Withholding or providing inaccurate information may impair a healthcare provider's ability to identify health problems and refer you to appropriate sources for additional evaluation or treatment. If you do not understand a question, please ask for help. Please respond based on your **MOST RECENT DEPLOYMENT**.

## DEMOGRAPHICS

Last Name

First Name

Middle Initial

Social Security Number

Date of Birth (dd/mm/yyyy)

Today's Date (dd/mm/yyyy)

Date arrived theater (dd/mm/yyyy)

Date departed theater (dd/mm/yyyy)

## Gender

- ☐ Male  
☐ Female

## Service Branch

- ☐ Air Force  
☐ Army  
☐ Navy  
☐ Marine Corps  
☐ Coast Guard  
☐ Civilian Employee  
☐ Other

## Marital Status

- ☐ Never Married  
☐ Married  
☐ Separated  
☐ Divorced  
☐ Widowed

## Status Prior to Deployment

- ☐ Active Duty  
☐ Selected Reserves - Reserve - Unit  
☐ Selected Reserves - Reserve - AGR  
☐ Selected Reserves - Reserve - IMA  
☐ Selected Reserves - National Guard - Unit  
☐ Selected Reserves - National Guard - AGR  
☐ Ready Reserves - IRR  
☐ Ready Reserves - ING  
☐ Civilian Government Employee  
☐ Other

## Pay Grade

- ☐ E1 ☐ O1 ☐ W1  
☐ E2 ☐ O2 ☐ W2  
☐ E3 ☐ O3 ☐ W3  
☐ E4 ☐ O4 ☐ W4  
☐ E5 ☐ O5 ☐ W5  
☐ E6 ☐ O6  
☐ E7 ☐ O7 ☐ Other  
☐ E8 ☐ O8  
☐ E9 ☐ O9  
☐ O10

## Location of Operation

To what areas were you mainly deployed (land-based operations more than 30 days)? Please mark all that apply, including the number of months spent at each location.

- ☐ Country 1 \_\_\_\_\_ Months \_\_\_\_\_  
☐ Country 2 \_\_\_\_\_ Months \_\_\_\_\_  
☐ Country 3 \_\_\_\_\_ Months \_\_\_\_\_  
☐ Country 4 \_\_\_\_\_ Months \_\_\_\_\_  
☐ Country 5 \_\_\_\_\_ Months \_\_\_\_\_

## Since return from deployment I have:

- ☐ Maintained/returned to previous status  
☐ Transitioned to Selected Reserves  
☐ Transitioned to IRR  
☐ Transitioned to ING  
☐ Retired from Military Service  
☐ Separated from Military Service

## Current Contact Information:

Phone: \_\_\_\_\_  
Cell: \_\_\_\_\_  
DSN: \_\_\_\_\_  
Email: \_\_\_\_\_  
Address: \_\_\_\_\_

## Total Deployments in Past 5 Years:

- | OIF                             | OEF                             | Other                           |
|---------------------------------|---------------------------------|---------------------------------|
| <input type="radio"/> 1         | <input type="radio"/> 1         | <input type="radio"/> 1         |
| <input type="radio"/> 2         | <input type="radio"/> 2         | <input type="radio"/> 2         |
| <input type="radio"/> 3         | <input type="radio"/> 3         | <input type="radio"/> 3         |
| <input type="radio"/> 4         | <input type="radio"/> 4         | <input type="radio"/> 4         |
| <input type="radio"/> 5 or more | <input type="radio"/> 5 or more | <input type="radio"/> 5 or more |

## Current Unit of Assignment

## Current Assignment Location

## Point of Contact who can always reach you:

Name: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_

DD FORM 2900, 20080103

PREVIOUS EDITION IS OBSOLETE.

Page 1 of 5 Pages  
Adobe Professional 7.0

■ Physical Positive ● Behavioral Health Positive ⚙ Conditional

Service Member's Social Security Number: \_\_\_\_\_

1. Overall, how would you rate your health during the PAST MONTH?

☐ Excellent  
☐ Very Good  
☐ Good  
☐ Fair  
☐ Poor

2. Compared to before your most recent deployment, how would you rate your health in general now?

☐ Much better now than before I deployed  
☐ Somewhat better now than before I deployed  
☐ About the same as before I deployed  
☐ Somewhat worse now than before I deployed  
☐ Much worse now than before I deployed

3. During the past 4 weeks, how difficult have physical health problems (illness or injury) made it for you to do your work or other regular daily activities?

☐ Not difficult at all  
☐ Somewhat difficult  
☐ Very difficult  
☐ Extremely difficult

4. During the past 4 weeks, how difficult have emotional problems (such as feeling depressed or anxious) made it for you to do your work, take care of things at home, or get along with other people?

☐ Not difficult at all  
☐ Somewhat difficult  
☐ Very difficult  
☐ Extremely difficult

5. Since you returned from deployment, about how many times have you seen a healthcare provider for any reason, such as in sick call, emergency room, primary care, family doctor, or mental health provider?

☐ No visits  
☐ 1 visit  
☐ 2-3 visits  
☐ 4-5 visits  
☐ 6 or more

6. Since you returned from deployment, have you been hospitalized?

☐ Yes  
☐ No

7. During your deployment, were you wounded, injured, assaulted or otherwise physically hurt?

If NO, skip to Question 8.

7a. If YES, are you still having problems related to this wound, assault, or injury?

☐ Yes  
☐ No  
☐ Unsure

8. In addition to wounds or injuries you listed in question 7., do you currently have a health concern or condition that you feel is related to your deployment?

If NO, skip to Question 9.

8a. If YES, please mark the item(s) that best describe your deployment-related condition or concern:

<input type="checkbox"/> Fever	<input type="checkbox"/> Dimming of vision, like the lights were going out
<input type="checkbox"/> Cough lasting more than 3 weeks	<input type="checkbox"/> Chest pain or pressure
<input type="checkbox"/> Trouble breathing	<input type="checkbox"/> Dizzy, light headed, passed out
<input type="checkbox"/> Bad headaches	<input type="checkbox"/> Diarrhea, vomiting, or frequent indigestion/heartburn
<input type="checkbox"/> Generally feeling weak	<input type="checkbox"/> Problems sleeping or still feeling tired after sleeping
<input type="checkbox"/> Muscle aches	<input type="checkbox"/> Trouble concentrating, easily distracted
<input type="checkbox"/> Swollen, stiff or painful joints	<input type="checkbox"/> Forgetful or trouble remembering things
<input type="checkbox"/> Back pain	<input type="checkbox"/> Hard to make up your mind or make decisions
<input type="checkbox"/> Numbness or tingling in hands or feet	<input type="checkbox"/> Increased irritability
<input type="checkbox"/> Trouble hearing	<input type="checkbox"/> Taking more risks such as driving faster
<input type="checkbox"/> Ringing in the ears	<input type="checkbox"/> Skin diseases or rashes
<input type="checkbox"/> Watery, red eyes	<input type="checkbox"/> Other (please list): _____

9a. During this deployment, did you experience any of the following events? (Mark all that apply)

	Yes	No
(1) Blast or explosion (IED, RPG, land mine, grenade, etc.)	<input type="radio"/>	<input type="radio"/>
(2) Vehicular accident/crash (any vehicle, including aircraft)	<input type="radio"/>	<input type="radio"/>
(3) Fragment wound or bullet wound above your shoulders	<input type="radio"/>	<input type="radio"/>
(4) Fall	<input type="radio"/>	<input type="radio"/>
(5) Other event (for example, a sports injury to your head). Describe: _____	<input type="radio"/>	<input type="radio"/>

9b. Did any of the following happen to you, or were you told happened to you, IMMEDIATELY after any of the event(s) you just noted in question 9a.? (Mark all that apply)

	Yes	No
(1) Lost consciousness or got "knocked out"	<input type="radio"/>	<input type="radio"/>
(2) Felt dazed, confused, or "saw stars"	<input type="radio"/>	<input type="radio"/>
(3) Didn't remember the event	<input type="radio"/>	<input type="radio"/>
(4) Had a concussion	<input type="radio"/>	<input type="radio"/>
(5) Had a head injury	<input type="radio"/>	<input type="radio"/>

9c. Did any of the following problems begin or get worse after the event(s) you noted in question 9a.? (Mark all that apply)

	Yes	No
(1) Memory problems or lapses	<input type="radio"/>	<input type="radio"/>
(2) Balance problems or dizziness	<input type="radio"/>	<input type="radio"/>
(3) Ringing in the ears	<input type="radio"/>	<input type="radio"/>
(4) Sensitivity to bright light	<input type="radio"/>	<input type="radio"/>
(5) Irritability	<input type="radio"/>	<input type="radio"/>
(6) Headaches	<input type="radio"/>	<input type="radio"/>
(7) Sleep problems	<input type="radio"/>	<input type="radio"/>

9d. In the past week, have you had any of the symptoms you indicated in 9c.? (Mark all that apply)

	Yes	No
(1) Memory problems or lapses	<input type="radio"/>	<input type="radio"/>
(2) Balance problems or dizziness	<input type="radio"/>	<input type="radio"/>
(3) Ringing in the ears	<input type="radio"/>	<input type="radio"/>
(4) Sensitivity to bright light	<input type="radio"/>	<input type="radio"/>
(5) Irritability	<input type="radio"/>	<input type="radio"/>
(6) Headaches	<input type="radio"/>	<input type="radio"/>
(7) Sleep problems	<input type="radio"/>	<input type="radio"/>

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■ Physical Positive ● Behavioral Health Positive ● Conditional

Service Member's Social Security Number: \_\_\_\_\_

10. Do you have any persistent major concerns regarding the health effects of something you believe you may have been exposed to or encountered while deployed? ■ Yes ○ No  
If NO, skip to question 11.

10a. If YES, please mark the item(s) that best describe your concern:

<input type="radio"/> Animal bites	<input type="radio"/> Loud noises
<input type="radio"/> Animal bodies (dead)	<input type="radio"/> Paints
<input type="radio"/> Chlorine gas	<input type="radio"/> Pesticides
<input type="radio"/> Depleted uranium (If yes, explain) _____	<input type="radio"/> Radar/Microwaves
<input type="radio"/> Excessive vibration	<input type="radio"/> Sand/dust
<input type="radio"/> Fog oils (smoke screen)	<input type="radio"/> Smoke from burning trash or feces
<input type="radio"/> Garbage	<input type="radio"/> Smoke from oil fire
<input type="radio"/> Human blood, body fluids, body parts, or dead bodies	<input type="radio"/> Solvents
<input type="radio"/> Industrial pollution	<input type="radio"/> Tent heater smoke
<input type="radio"/> Insect bites	<input type="radio"/> Vehicle or truck exhaust fumes
<input type="radio"/> Ionizing radiation	<input type="radio"/> Other exposures to toxic chemicals or materials, such as ammonia, nitric acid, etc.: (If yes, explain) _____
<input type="radio"/> JP8 or other fuels	
<input type="radio"/> Lasers	

11. Since return from your deployment, have you had serious conflicts with your spouse, family members, close friends, or at work that continue to cause you worry or concern? ● Yes ○ No ● Unsure

12. Have you ever had any experience that was so frightening, horrible, or upsetting that, IN THE PAST MONTH, you ....

- a. Have had nightmares about it or thought about it when you did not want to? ● Yes ○ No  
b. Tried hard not to think about it or went out of your way to avoid situations that remind you of it? ● Yes ○ No  
c. Were constantly on guard, watchful, or easily startled? ● Yes ○ No  
d. Felt numb or detached from others, activities, or your surroundings? ● Yes ○ No

- 13a. In the PAST MONTH, Did you use alcohol more than you meant to? ● Yes ○ No

- b. In the PAST MONTH, have you felt that you wanted to or needed to cut down on your drinking? ● Yes ○ No

- c. How often do you have a drink containing alcohol?

☐ Never ☐ Monthly or less ☐ 2 to 4 times a month ☐ 2 to 4 times a week ☐ 4 or more times a week

- d. How many drinks containing alcohol do you have on a typical day when you are drinking?

☐ 1 or 2 ☐ 3 or 4 ☐ 5 or 6 ☐ 7 to 9 ☐ 10 or more

- e. How often do you have six or more drinks on one occasion?

☐ Never ☐ Less than monthly ☐ Monthly ☐ Weekly ☐ Daily

● Positive if  
c.+d.+e. =  
≥4 for men or  
≥3 for women.

14. Over the PAST MONTH, have you been bothered by the following problems?

	Not at all	Few or several days	More than half the days	Nearly every day
a. Little interest or pleasure in doing things	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
b. Feeling down, depressed, or hopeless	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

15. Would you like to schedule a visit with a healthcare provider to further discuss your health concern(s)? ● Yes ○ No

16. Are you currently interested in receiving information or assistance for a stress, emotional or alcohol concern? ● Yes ○ No

17. Are you currently interested in receiving assistance for a family or relationship concern? ● Yes ○ No

18. Would you like to schedule a visit with a chaplain or a community support counselor? ● Yes ○ No

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## DoD Project Final Report: Contract # W81XWH-07-P-1026

## Post-Deployment Health Reassessment (PDHRA)

## User's Guide

Service Member's Social Security Number:

Date (dd/mm/yyyy):

**Assessment and Referral:** After my interview with the service member and review of this form, there is a need for further evaluation and follow-up as indicated below. (More than one may be noted for patients with multiple concerns.)

7. Identified Concerns	Minor Concern	Major Concern	Already Under Care		8. Referral Information	Within 24 hours	Within 7 days	Within 30 days
			Yes	No				
<input type="radio"/> Physical Symptom(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	a. Primary Care, Family Practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Exposure Symptom(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	b. Behavioral Health in Primary Care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Depression symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	c. Mental Health Specialty Care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> PTSD symptoms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	d. Other specialty care:			
<input type="radio"/> Anger/Aggression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Audiology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Suicidal Ideation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Cardiology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Social/Family Conflict	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dentistry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Alcohol Use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Dermatology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/> Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	ENT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Comments:					GI	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Internal Medicine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Neurology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					OB/GYN	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Ophthalmology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Optometry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Orthopedics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Pulmonology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					Urology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					e. Case Manager, Care Manager	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					f. Substance Abuse Program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					g. Health Promotion, Health Education	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					h. Chaplain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					i. Family Support, Community Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					j. Military OneSource	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					k. Other: _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
					l. No referral made	<input type="radio"/>		

I certify that this review process has been completed.

10. Provider's signature and stamp:

ICD-9 Code for this visit: V70.5 \_ F

## Ancillary Staff/Administrative Section

11. Member was provided the following:	12. Referral was made to the following healthcare or support system:
<input type="radio"/> Health Education and Information	<input type="radio"/> Military Treatment Facility
<input type="radio"/> Health Care Benefits and Resources Information	<input type="radio"/> Division/Line-based medical resource
<input type="radio"/> Appointment Assistance	<input type="radio"/> VA Medical Center or Community Clinic
<input type="radio"/> Service member declined to complete form	<input type="radio"/> Vet Center
<input type="radio"/> Service member declined to complete interview/assessment	<input type="radio"/> TRICARE Provider
<input type="radio"/> Service member declined referral for services	<input type="radio"/> Contract Support: _____
<input type="radio"/> LOD	<input type="radio"/> Community Service: _____
<input type="radio"/> Other: _____	<input type="radio"/> Other: _____
	<input type="radio"/> None

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**Appendix K: Summary of Expert Panel Input for Defining Positive  
and Negative Responses on the DD Form 2796 (PDHA)**

Several items in the self-report section of the DD Form 2796 had multiple response options, which needed to be simplified to determine positive (had a problem) or negative (no problem) responses. We relied on recommendations of the PDHRA Expert Panel convened for this evaluation (see Appendix B for a list of members) to make these simplifications. This appendix describes these specific recommendations from Expert Panel members regarding defining combat exposure, combat locations, and several subscales on the self-report section of the PDHA.

Input was obtained from Expert Panel members associated with the Air Force, Marine Corps, and the Army.

### **Defining Combat Exposure**

**Consensus:** Combat exposure should be defined as a positive response to any of the following four questions:

(10) Did you encounter dead bodies or see people killed or wounded during this deployment?

(11) Were you engaged in direct combat where you discharged a weapon?

(12) During this deployment, did you ever feel that you were in great danger of being killed?

*Note that it is possible that Emergency Response personnel, for example, might endorse 10 or 12 without being outside the wire in a combat situation; however, this exposure is still representative of combat exposure.*

(9.a.)\* During this deployment, did you experience any of the following events? note only 2 responses count for this question: (1) blast or explosion, (3) fragment wound or bullet wound above your shoulders.

\*Ultimately, this question was not used to define combat exposure in the report. Only questions 10-12 were used.

### **Defining Combat Location**

Table K.1 below was combined from various sources as noted. The last column shows the percentage of SMs who endorsed any one or more of the combat exposure variables.

**Table K.1 Combat and non-combat locations**

Location (% of sample)	Air Force	Marine Corps	Army	Percent of SMs with combat exposure
Iraq (62%)	Combat	Combat since 17 Sep 1991 (Land and Air Space)	Combat	44%
Afghanistan (13%)	Combat	Combat since 01 Nov 1998 (Land and Air Space)	Combat	54%
Kuwait (9%)	Non-Combat	Combat since 6 Aug 1990 (Land and Air Space)	Combat	27%
Qatar (5%)	Non-Combat (R&R location)	Combat since 7 Aug 1997 (Land and Air Space)	Combat	8.50%
United Arab Emirates (2%)	Non-Combat	Combat since 9 Sep 2001 (Land Area)	Combat	3.10%
Country Code IY (1%)	Undetermined	Undetermined	Non-Combat	
Kyrgyzstan (1%)	Non-Combat	Combat since 19 Sep 2001 (Land and Air Space)	Non-Combat	
US (1%)	Non-Combat	Non-Combat	Non-Combat	
All other locations (< 1%)	N/A	N/A	N/A	

Ultimately, it was decided to include only deployments to Iraq and Afghanistan in the main body of the report as these locations were similarly high in the number of SMs with positive combat exposure. Including other locations with lower rates of combat exposure might have obscured important results for the combat groups. Appendix E provides descriptive statistics for all items on the January 2008 version of the PDHA and PDHRA for the following deployment locations: Iraq, Afghanistan, both Iraq and Afghanistan, Kuwait, Qatar, and all other locations.

#### **Defining positive responses for PDHA sub-scales**

The list below shows how each of the PDHA subscales was reduced to a positive (problem present) or negative (problem absent) value. Asterisks (\*) mean these items were part of the inquiry to the Expert Panel.

- General health: questions 1-7 (page 2)
  - Positive response: Same as Air Force Guide for scoring the PDHRA (Appendix C)
- \*Physical health symptoms: question 8
  - Positive response: Yes for Still Bothered. Do not count Sick Call or Qtrs/Profile as a positive
- TBI: question 9 (a through d)
  - Positive response: Same as Air Force Guide for scoring the PDHRA (Appendix C)
- \*Combat exposure: Yes for any of questions 10-12
- PTSD: question 13
  - Positive response: Same as Air Force Guide for scoring the PDHRA (Appendix C)
- Depression: question 14

- Positive response: Same as Air Force Guide for scoring the PDHRA (Appendix C)
- Alcohol: question 15
  - Positive response: Same as Air Force Guide for scoring the PDHRA (Appendix C)
- \*Exposure: questions 16—20
  - Question 16 positive response: Yes
  - Question 17\*\* positive response: Yes
  - Question 18\*\* positive response: Yes
  - Question 19 positive response: Yes
  - Question 20\*\* positive response: Moderate or Extensive

\*\* These questions were ultimately not included in analyses due to psychometric analysis showing low item-total correlation (see Appendix D)
- Requests for support: Questions 24-27
  - Positive response: Same as Air Force Guide for scoring the PDHRA (Appendix C)

## **Appendix L: Psychometrics**

## ***Introduction***

### **Background and Significance**

If a set of questions contains a common thread, such as questions about aspects of depression, there is great advantage in treating the items as a scale, i.e., a scale that measures depression, rather than a measurement of individual items. The primary advantage is parsimony; that is, asking a few important questions rather than many less-important ones. Another advantage is reliability. For almost a century, psychometric theory has professed that the more items a scale has, the more reliable will be its total score (2).

### **Objective**

The primary objectives of this appendix included the following: (1) to describe psychometric characteristics of the DD Form 2796 and DD Form 2900, and (2) to describe relationships between items and embedded subscales from the two forms with each other and with subsequent health service encounters. To seek these advantages, we tested the item sets in the various screening forms to determine if they performed adequately as scales.

### **Study Design and Aims**

The psychometric analyses evaluate every item of every instrument for its reliability and validity when treated as part of a scale or index.

### ***Methods***

#### **Data Sources**

The electronic data set consists of de-identified individual Service members' (SMs) military health records, including the PDHA (DD Form 2796), the PDHRA (DD Form 2900), and inpatient and outpatient health care utilization information. Records included are from January 1, 2006 thru March 15, 2009.

#### **Study Population**

This analysis was conducted on a random sample from each of the following: 2005 version PDHRA, 2008 version PDHRA, 2003 version PDHA and 2008 version PDHA. The sample sizes ranged from 10,000 to 14,000.

### **Analyses**

#### **Determining Reliability**

The reliability of each instrument was determined using the Classical Test Theory (CTT), Confirmatory Factor Analysis (CFA), and the Item Response Theory (IRT). These methods are described below. Statistical analyses were done using SAS 9.2 and Winsteps. The terms Rasch modeling and Item Response Theory (IRT) are used interchangeably to refer to the logistic model-based approach to test development as compared to the CTT. Logistic models are used when the dependent variables are dichotomous and the independent variables are of any type.

### Comprehensive Item Psychometrics

Each item was examined using current available models for psychometrics, namely the CTT, CFA, and Rasch modeling (IRT). All three methods are valid tools, each with strengths and limitations, for creating brief instruments for frequent use. Each of the models produces information which may be used to identify stronger and weaker items in a given test. By putting this information into a single table, a test and its items can be evaluated at a glance. Information about the statistical merits of each item is necessary to determine whether a test should be revised.

### Reliability Coefficients

Cronbach's alpha internal consistency reliability correlations were calculated for total scores and any subscale scores where applicable. This statistic is larger when internal consistency is high and smaller when it is low. A Cronbach's alpha of 0.80 or higher is generally considered satisfactory (3), indicating that a measure is of sufficient length and that the items appear to be measuring similar content.

Table L.1 (4) shows the statistical information for a test or questionnaire with Likert scale items and the criteria used to evaluate each item (5). Additional information on these criteria is in text following the table.

**Table L.1. Statistical Properties of Effective Test Items**

Criterion	Sought Values	Rationale
Mean	Between 2 and 4 (5 pt scale)	Avoid floors and ceilings in the target sample
Rasch Measure Score	Cover the range	Need items across the range of youth
Kurtosis	Not extremely high	Avoid items where everyone gives the same response
Item-Total Correlation	Higher better	Keep items that measure a single thing
Infit & Outfit	Between 0.5 and 1.5	Keep items that fit 1PL (logistic) model
Discrimination	Avoid low discrimination	Avoid items that can't discriminate

**Mean:** If an item's mean is at the top or bottom of its range (e.g., a mean of 4.8 or 1.2 on a 1-5 scale) this indicates that nearly everyone is giving the same rating, making it impossible for that item's slight variance to correlate with anything.

**Kurtosis:** A good way to identify items with poor measurement ability is to focus on those that are excessively leptokurtic, meaning that a great number of people all have the same score on those items. An example is the item "I have attempted suicide" in a nonclinical sample. Since nearly all respondents would say "No," the kurtosis is very high. Traditionally, psychometricians say that items with extreme means and kurtosis have floor or ceiling artifacts make little psychometric contribution to a test.

*Rasch Measure Score*: An item's difficulty or rarity as expressed in the measure score in the Rasch logistic model shows where the item is efficient and informative about a given test taker. For example, an "easy" item to endorse, such as "I have worried more than once," might reveal very little about differences between serious cases of psychopathology. The most efficient strategy for accurate measurement is to have a range of items, from very easy to very difficult or unusual (e.g., "I have committed homicide"), so as to ensure that the entire range of clients is measured reliably.

*Item-Total Correlation*: In classical test theory (6), test designers discovered that if a group of items is a reliable measure of a single construct, such as psychopathology or intelligence, those items must be correlated. In order to identify the odd, unrelated items by their low correlation, it was necessary to observe the correlation between each item and the sum of all the others. It is futile to add unrelated items into an index score. By dropping items with low item-total correlations, an index with high internal consistency was created.

*MSA (Kaiser et al. Measure of Sampling Adequacy)*: Do items share sufficient variance? Poor items do not fit the common factor model very well. Standards: 0.9 - marvelous, 0.8 - meritorious, 0.7 - middling, 0.6 - mediocre, or 0.5 - miserable (perfectly uncorrelated)

*Rasch Model Infit and Outfit*: Since the Rasch model defines good measurement, items that fit the model are good items, and scores on the good items show a consistent s-shaped logistic to give relationship to the responder's strength of the measured trait. The *Infit* mean square measures model fit for the middle cases in the distribution; *Outfit*, for the extreme cases at the tails of the distribution. According to Bond and Fox, (7), Items with an *Infit* and *Outfit* between 0.3 and 1.3 contribute to the reliability of measurement, and items outside that range do not.

*Rasch Model Discrimination*: While the Rasch model is a 1-parameter logistic model, with WINSTEPS® 3.63.0 (5), each item's discrimination after the 1-parameter logistic model is estimated. Items with low discrimination are less effective at detecting which people are high or low on the trait measured. Thus, based on all of these indices of item quality, items from some instruments were dropped. While these criteria provide guidance, there are no agreed upon cut scores for most of them. However, in our testing, the eliminated items fortunately had warning flags on multiple items.

*Person Reliability*: Does the test fit the Rasch model well enough to detect differences between individuals at a 0.75 level or better? Person reliability typically runs a little lower than Cronbach's alpha.

*Factorial Validity*: Factorial validity examines whether the correlations among test items fit the theory of what the test purports to measure. One of the purposes of the study was to assess the factorial validity of the PDHA and PDHRA measures.

*Confirmatory Factor Analysis*: Confirmatory factor analysis (CFA) estimates how well a measurement model fits the data. For example, when several sub-scales are purported by theory, they can be tested to see how well the theory fits the data. CFA was used here to determine the "factorial validity" of each scale. While this form of validity is less important than criterion validity, it is necessary for the interpretation of scores. Three popular fit statistics named in Table L.2 were used to estimate model fit: Bentler's Comparative Fit Index (8) and the Root Mean

Square Error of Approximation (RMSEA)(9). A one-factor model required these rather exacting cutoffs(10). According to Browne and Cudeck (11), values greater than 0.90 indicate good fit between a model and the data for the CFI and GFI; for the RMSEA, a value of 0.05 indicates close fit, 0.08 fair fit, and 0.10 marginal fit (12).

*Discrimination Parameter:* Winsteps estimates how well items discriminate mild and severe cases. This measure is mathematically closely related to item-total correlation. Low values indicate insensitivity to the trait or state being measured.

*Fit Criteria Requirement:*

Bentler's CFI: 0.90 or more

RMSEA: Satisfactory = 0.05 or less, Fair = 0.08 to 0.051

**Table L.2. Guidelines for grading scales and indices.**

Ratings were made using inductive logic and expert judgment, not mechanical rules. Full scale characteristics were used; when in doubt, item characteristics were examined.

**CTT (Classical Test Theory):**

Alpha > .80

MSA > .80

**CFA (Confirmatory Factor Analysis):**

RMSEA Less than or Equal to 0.06

Bentler CFI Greater than or Equal to 0.96

**IRT (Item Response Theory /Rasch Modeling):**

Items fit 0.7 - 1.3

IRT person reliability > 0.75

On scales that are marginal item statistics were examined (e.g., infit = MAX is not good, absurd measure scores not good). Reports on lower-graded scales should be done with recognition of their technical limitations.

*Item Scores:* Each set of items was treated as a “scale candidates” to be evaluated for adequacy as a single summary score. Each set of items was evaluated as poor, marginal, or excellent by criteria from Classical Test Theory, Confirmatory Factor Analysis, and Item Response Theory (1-parameter Rasch model) (Table L.3).

**Table L.3. Item Scores**

Criteria	Score	Interpretation
CTT	0	Poor Fit
	1	Marginal Fit
	2	Excellent Fit
CFA	0	Poor Fit
	1	Marginal Fit
	2	Excellent Fit
IRT	0	Poor Fit
	1	Marginal Fit
	2	Excellent Fit

*Overall Scores:* Each set of items was “graded” for its adequacy as a scale using the sum of the items scores from each of the three criteria in Table L.3. The main criteria appear in Table L.4.

The criteria were not applied mechanically, but rather like grading an exam by an experienced psychometrist.

**Table L.4. Overall Scores**

Overall Score	Interpretation	Grade
6	An excellent scale	A
5	A very good scale	A-
4	A good scale	B
3	A marginal scale	B-
2	A weak scale	C
1	Barely a scale	C-
0	Items, not a scale	D

## Results

### General Description of Scales and Test Scores

The analysis was done at the sub-scale level and not at the item level. All four versions of the PDHA and PDHRA were considered: the 2005 and 2008 PDHRA and the 2003 and 2008 PDHA. Two additional sub-scales were created for both versions of the PDHA and PDHRA: the Overall PDHA/PDHRA Scale and the Behavioral Health Scale (note that this was not a viable scale for either version of the PDHA, thus was not included in the tables below). Only viable scales were included in this analysis. The scale scores and scale-item correlations for viable scales are shown in tables L.5 to L.8 below. These tables also show items removed from scales due to low item-total correlation (see section above titled *Item Total Correlation*). Note that the Behavioral Health Scale did not produce a valid scale with either version of the PDHA due to an insufficient number of items, and is therefore not included in the PDHA tables below.

Scores and item correlations shown in tables L.5 to L.8 depend on SMs' responses. Therefore, even when items were the same between versions, e.g., the PTSD questions on the PDHRA, scores and item correlations are different between versions because SMs' responses were different.

Alcohol: Alcohol was measured using a 5-item scale on the new forms and a 2-item scale on the old forms. This scale was dropped from the old versions of both forms because there were not enough items for it to be considered a scale. Even though the new forms had 5 items, the total score of 1 with a grade C- is very low.

Depression: This is a 2-item scale that is used to detect symptoms of depression. The questions asked are, "Have you experienced little interest in things?" and "Have you been feeling down?" The difference between the two forms is in the duration of the time period covered; the PDHA uses the past 2 weeks while the PDHRA uses the past month. The 2003 PDHA also included a third item that asked whether the Service Member thought he or she was "better off dead." This item was dropped due to an item-total correlation of less than 0.30 (see Decision rule). A scale needs at least 3 items to be considered viable. Therefore, the Depression was too short to be considered a valid scale; however, grades were assigned to the scale on the 2008 PDHRA and

the 2003 PDHA even though they only had two items. Depression received a grade of B- based on a total score of 3 on both versions of the PDHRA. Even though this score is marginally acceptable, the scale is still too short to be considered a valid scale. The 2003 PDHA scored low, with a score of 1 and a grade of C-.

Exposure: This scale measured the exposure to potentially harmful experiences. The old versions of both forms consisted of a 22-item scale, while the 2008 PDHRA had 24 items and the 2008 PDHA had 28 items. Both new versions had a total score of 5 and received a grade of A-, the highest for any scale measured. The old versions also scored well, with a total score of 4 and a grade of B. These scales are thus considered very good as far as this analysis is concerned. A few items in each group were dropped due to an item-total correlation of less than 0.3

Overall Health History: This scale measures changes in health concerns or symptoms, as well as hospitalization rates. The questions focus on changes in health, emotional changes, physical changes, frequency of hospitalizations, etc. This scale was dropped from the analysis of the 2003 PDHA because all item-total correlations were less than 0.30. On the 2008 PDHRA, the scale scored a total of 4 receiving a grade of B. This is a good scale overall even though one item was removed from both the 2005 and 2008 PDHRA due to a low item-total correlation. On the 2008 PDHA all items were included, and the scale received a total score of 3 with a grade of B-.

Physical Symptoms: This scale detects the presence of physical health concerns. The new versions of both forms had 24 and 25 items, respectively, while the old versions had 21 items. Items were dropped from every group but the 2003 PDHA because of item-total correlations of less than 0.30. Overall, the physical scale is good, as it received a total score of 4 with a grade B on the 2005 and 2008 PDHRA and the 2003 PDHA. The scale had a total score of 3 with a grade of B- on the 2008 PDHA.

Post Traumatic Stress Disorder (PTSD): PTSD was measured using a 4-item scale, including questions regarding having nightmares, avoiding situations, always being on guard, and feeling detached. This scale had the lowest score on the 2008 PDHA as two of the items (questions 13c and 13d) had to be dropped due to an item-total correlation of less than 0.30 (see Decision rule). PTSD scored a 4 with a grade of B on the 2008 PDHRA, a 3 with a grade B- on the 2005 PDHRA and scored a 5 on the 2003 PDHA thus receiving a grade of A-.

Request for Information: This scale implemented 4 items: provider information, stress relief, family help and chaplain or other professional help, to measure the Service Members request for information or assistance. The 2003 PDHA did not include this scale. On the 2008 PDHRA and PDHA, the scale was considered weak due to a total score of 2 with a grade of C. On the 2005 PDHRA, it had a total score of 3 with a B-.

Traumatic Brain Injury (TBI): Traumatic Brain Injury was introduced on the new versions of both forms. A 24-item scale was used to detect symptoms of a concussion or other head-related injuries. TBI is a marginally acceptable scale, scoring a 3 with a grade of B- on both the PDHA and PDHRA.

Overall PDHA/PDHRA: This scale was derived by combining all the individual scales, including the question about conflict (PDHRA only, question 8 in 2005 version and question 11 in 2008 version), and using them as items in the Overall PDHA/PDHRA. Alcohol was eventually

dropped because of poor item-total correlation. This scale had a total score of 4 with a grade of B on all but the 2008 PDHRA where it scored a 3, earning it a B-. Overall, the scale could be classified as good.

***Behavioral Health:*** This Behavioral Health scale was derived by combining the PTSD, Depression, alcohol (ETOH) scales and Conflict the conflict item (PDHRA only) scales to get an overall assessment of behavioral health. This combination of items did not produce a valid scale with the PDHA due to an insufficient number of items. On the PDHRA, the 2005 version fared better, with a total score of 4 and a grade of B, while the 2008 version only had a 1 in total, earning it a C-.

**Table L.5 Items removed from the 2003 PDHA scales after psychometric analysis**

Scale	Description	Items Removed
Depression	Depressive symptoms	none
Exposure	Hazardous Exposures	Flea, uranium, other, radiation, laser
Physical	Reported physical symptoms	none
PTSD	Post Traumatic Stress disorder	none
Overall PDHA	All individual scales except alcohol	none

**Table L.6 Items removed from the 2008 PDHA scales after psychometric analysis**

Scale	Description	Items Removed
Alcohol	Alcohol Use	none
Exposure	Hazardous Exposures	Animal bite, chlorine, uranium, radiation, other, chemical, destroyed vehicles, contact
General	Overall Health History	none
Physical	Reported physical symptoms	Fever, vomit, rash, other
Request	Request for Information	none
TBI	Traumatic Brain Injury	Wound, other event
Overall PDHA	All individual scales except alcohol	Alcohol, physical

**Table L.7 Items removed from the 2005 PDHRA scales after psychometric analysis**

Scale	Description	Items Removed
Exposure	Hazardous Exposures	Flea, uranium, other
General	Overall Health History	Hospitalized after
Physical	Reported physical symptoms	Runny nose, fever, rash, other
PTSD	Post Traumatic Stress disorder	none
Request	Request for Information	chaplain
Overall PDHRA	All individual scales except alcohol	none
Behavioral Health	Behavioral Health Scale	none

**Table L.8 Items removed from the 2008 PDHRA scales after psychometric analysis**

Scale	Description	Items Removed
Alcohol	Alcohol Use	none
Exposure	Hazardous Exposures	Animal bite, chlorine, uranium, radiation, other
General	Overall Health History	Hospitalized after
Physical	Reported physical symptoms	Fever, cough, rash, other
PTSD	Post Traumatic Stress disorder	none
Request	Request for Information	none
TBI	Traumatic Brain Injury	Other event
Overall PDHRA	All individual scales except alcohol	Alcohol
Behavioral Health	Behavioral Health Scale	none

**Discriminant Validity**

If items are grouped into separate scales, they should not have extremely high correlations with each other; such correlations would indicate that the scales are not distinct. Psychometricians call this “discriminant validity” (13, 14). To determine the discriminant validity of the scale evaluated in this study, we examined the correlation of each scale with every other scale. Table L.9 below shows the correlations among all the scales. The scales were all positively correlated. But the correlations were all equal to or less than  $r = 0.52$ . These correlations are low enough to suggest that each scale is considerably distinct. For example, two scales with  $r = 0.52$  share only 27% of their variances, having 73% that is distinct.

**Table L.9. Correlations Among PDHRA Scales**

Scale 1	Scale 2	N SMs	Correla tion
SM Physical Sub-Scale	SM PTSD Sub-Scale	9652	0.52
SM Depression Sub-Scale	SM PTSD Sub-Scale	8988	0.51
SM Depression Sub-Scale	SM Physical Sub-Scale	9037	0.45
SM Physical Sub-Scale	SM TBI Sub-Scale	9656	0.41
SM PTSD Sub-Scale	SM TBI Sub-Scale	9595	0.40
SM Exposure Sub-Scale	SM Physical Sub-Scale	1000 0	0.38
SM Depression Sub-Scale	SM Alcohol Sub-Scale	8981	0.34
SM Depression Sub-Scale	SM TBI Sub-Scale	8980	0.30
SM Alcohol Sub-Scale	SM PTSD Sub-Scale	9636	0.29
SM Exposure Sub-Scale	SM PTSD Sub-Scale	9652	0.26
SM Alcohol Sub-Scale	SM Physical Sub-Scale	9647	0.25
SM Exposure Sub-Scale	SM TBI Sub-Scale	9656	0.19
SM Alcohol Sub-Scale	SM TBI Sub-Scale	9589	0.19
SM Depression Sub-Scale	SM Exposure Sub-Scale	9037	0.18
SM Alcohol Sub-Scale	SM Exposure Sub-Scale	9647	0.11

*Notes: Correlations were Pearson correlations.*

*All correlations were statistically significant  $p < .0001$ . According to Cohen (15) correlations of .10/.30/.50 may be considered small/medium/large.*

### **Convergent Validity**

Another measure of validity is “Convergent Validity” (13). “Convergent Validity” theory purports that if the total score is an overall measure of the number and severity of problems reported, and these problems have various aspects (Exposure, TBI, etc), then all of the subscales should have positive correlations with the Overall Scale. Table L.10 below shows these correlations, which range from  $r = +0.22$  to  $r = +0.54$ .

These correlations were consistent with the theory of the PDHRA form:

- Problems reported on the PDHRA have 6 aspects; measured by six subscales or indices.
- The overall level of problems experienced, as indicated by the subscales, is measured by the Overall PDHRA Subscale.
- Overall PDHRA and specific problem areas are all positively correlated.

The existence of an Overall PDHRA Subscale suggests that some SMs experience few problems while others experience many. For instance, an SM who suffers one type of problem, such as exposure to noise, is likely to have been exposed to other stressors as well. This makes sense because some assignments, such as combat in Iraq or Afghanistan, expose the SM to a wide variety of stressors that could result in SMs being concerned about their health. Other

assignments may involve little exposure to various stressors. Thus, those who are exposed may be more likely to develop multiple physical or behavioral problems that require treatment.

These psychometric results suggest that we can view the PDHRA as having a reliable general scale of overall problems and also 6 reliable sub-scales indicating different aspects of problems and concerns reported on the PDHRA. All the scales correlate with the total score, but again the correlations suggest considerable distinctness among the scores.

**Table L.10. Correlations among subscales in the Overall PDHRA scale.**

Label	Label	N	Correlation
SM Depression Subscale	Overall PDHRA Subscale	9037	0.49
Used alcohol more than meant to		9647	0.22
SM Exposure Subscale		10000	0.26
SM Physical Subscale		10000	0.54
SM PTSD Subscale		9652	0.43
SM TBI Subscale		9656	0.35

## **Appendix M: DD Form 2796 and DD Form 2900 Items – Descriptive Statistics by Deployment Location**

**Table M. 1. January 2008 DD Form 2796 Items – Descriptive Statistics by Deployment Location**

Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
<b>Gender</b>							
Male	91%	91%	93%	86%	85%	86%	89%
Female	9%	9%	7%	14%	15%	14%	11%
<b>Age</b>							
N	156745	33916	1538	15513	12986	33978	255188
Mean	28.76	30.44	30.95	30.2	30.33	31.88	29.59
Standard Deviation	7.5	8.15	8.47	8.62	7.49	9.27	8
Median	26	28	28	28	28	29	27
Range	52	47	43	48	46	50	52
<b>Race</b>							
Missing	2%	2%	3%	3%	3%	2%	2%
Asian/Pacific Islander	4%	4%	5%	5%	4%	4%	4%
Black	14%	11%	14%	16%	13%	16%	14%
Hispanic	10%	9%	11%	10%	6%	10%	10%
American Indian/Alaskan Native	1%	1%	2%	1%	1%	2%	1%
Other	0%	0%	1%	1%	1%	0%	0%
White	69%	71%	65%	64%	73%	65%	68%
<b>Education Level</b>							
Bachelor's degree	11%	14%	12%	12%	18%	14%	12%
High school	74%	64%	69%	70%	58%	62%	70%
Master's degree	3%	4%	5%	3%	6%	4%	3%
No high school	1%	1%	1%	1%	0%	1%	1%
Doctorate	1%	1%	1%	1%	1%	2%	1%
Less than 4 years of college	10%	14%	9%	12%	16%	17%	12%
Unknown	2%	1%	3%	1%	1%	1%	1%
<b>Service</b>							
Air Force	14%	28%	18%	30%	93%	29%	23%
Army	63%	55%	45%	31%	3%	48%	55%
Marines	18%	10%	11%	21%	0%	6%	15%
Navy	5%	7%	26%	18%	4%	17%	8%
<b>Branch and Component</b>							
Army Active	50%	39%	35%	12%	2%	16%	39%
Army Reserve	4%	4%	4%	6%	1%	15%	5%
Army National Guard	9%	13%	6%	13%	0%	16%	10%
Air Force Active	11%	20%	14%	26%	80%	20%	18%
Air Force Reserve	1%	3%	3%	1%	5%	1%	2%
Air National Guard	2%	5%	1%	3%	7%	7%	3%
Navy Active	4%	6%	21%	10%	3%	16%	6%
Navy Reserve	1%	1%	5%	8%	0%	2%	2%
Marine Active Duty	16%	10%	11%	21%	0%	5%	13%
Marine Forces Reserve	2%	0%	0%	0%	0%	1%	1%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
<b>Pay Grade</b>							
E01-E04	45%	35%	31%	41%	31%	33%	41%
E05-E06	34%	35%	40%	36%	37%	37%	35%
E07-E09	8%	11%	11%	10%	10%	13%	10%
O01-O04	10%	13%	13%	10%	19%	12%	11%
O05-O10	2%	3%	4%	2%	3%	3%	2%
W01-W05	2%	2%	1%	1%	0%	1%	1%
<b>Any SM self-reported problems- created index*</b>							
No	22%	24%	24%	33%	52%	36%	26%
Yes	78%	76%	76%	67%	48%	64%	74%
<b>Overall PDHA-total SM self-reported problems- created index*</b>							
N	156751	33915	1535	15511	12988	33975	255188
Mean	2.09	1.95	2.07	1.49	0.79	1.39	1.88
Standard deviation	1.8	1.79	1.87	1.55	1.06	1.52	1.75
Median	2	1	2	1	0	1	1
Range	8	8	8	8	7	8	8
<b>1-7. General health history- created index*</b>							
N	155645	33772	1512	15242	12928	33622	253117
Mean	1.58	1.41	1.52	1.31	0.83	1.29	1.46
Standard deviation	1.57	1.51	1.58	1.4	1.07	1.47	1.52
Median	1	1	1	1	1	1	1
Range	7	7	7	7	7	7	7
<b>1. Health assessment (past month)</b>							
Missing	1%	1%	2%	2%	1%	2%	1%
Excellent	21%	24%	20%	28%	36%	27%	23%
Very good	35%	36%	33%	37%	39%	37%	35%
Good	34%	31%	33%	27%	21%	27%	31%
Fair	9%	7%	9%	6%	3%	6%	8%
Poor	1%	1%	1%	1%	0%	1%	1%
<b>2. Health change (compared to pre-deployment health)</b>							
Missing	3%	2%	4%	6%	1%	4%	3%
Much better now than before I deployed	6%	7%	5%	8%	14%	8%	7%
Somewhat better now than before I deployed	14%	15%	15%	17%	23%	16%	15%
About the same as before I deployed	54%	57%	54%	53%	55%	58%	55%
Somewhat worse now than before I deployed	21%	17%	19%	13%	7%	13%	18%
Much worse now than before I deployed	2%	2%	2%	1%	0%	2%	2%
<b>3. Daily activities difficult: physical problems (past 4 weeks)</b>							
Missing	1%	1%	3%	2%	1%	2%	2%
Not difficult at all	73%	77%	73%	79%	88%	79%	76%
Somewhat difficult	23%	20%	21%	16%	11%	16%	20%
Very difficult	2%	2%	2%	2%	1%	2%	2%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Extremely difficult	1%	0%	1%	0%	0%	1%	0%
<b>4. Daily activities difficult: emotional problems (past 4 weeks)</b>							
Missing	2%	1%	3%	3%	1%	2%	2%
Not difficult at all	72%	78%	71%	78%	88%	81%	75%
Somewhat difficult	22%	17%	20%	16%	10%	14%	19%
Very difficult	3%	3%	4%	2%	1%	2%	3%
Extremely difficult	1%	1%	1%	1%	0%	1%	1%
<b>6. Hospitalized during deployment</b>							
Missing	1%	1%	3%	3%	1%	2%	2%
No	94%	96%	92%	94%	98%	94%	95%
Yes	4%	3%	5%	3%	1%	4%	4%
<b>7. Injured during deployment</b>							
Missing	1%	1%	3%	2%	1%	2%	1%
No	81%	82%	81%	83%	91%	82%	82%
Yes	17%	17%	16%	15%	8%	17%	17%
<b>7a. Problems related to injury</b>							
Missing	77%	75%	79%	80%	92%	75%	77%
No	11%	13%	10%	10%	4%	13%	11%
Yes	10%	10%	9%	8%	3%	9%	9%
Unsure	2%	2%	2%	2%	1%	2%	2%
<b>8. Physical health concerns- created index*</b>							
N	156751	33915	1535	15511	12988	33975	255188
Mean	1.45	1.18	1.52	0.87	0.23	0.86	1.24
Standard deviation	2.76	2.46	2.99	2.11	0.99	2.11	2.56
Median	0	0	0	0	0	0	0
Range	21	21	19	21	21	21	21
<b>8. Physical health concerns- saw a healthcare provider, placed on quarters, and still bothered by symptom</b>							
<b><i>Fever- sick call</i></b>							
Missing	23%	34%	28%	36%	91%	34%	30%
No	69%	58%	64%	57%	5%	59%	62%
Yes	8%	8%	8%	7%	4%	7%	7%
<b><i>Fever- quarters/profile</i></b>							
Missing	44%	52%	49%	59%	95%	56%	50%
No	53%	45%	47%	37%	4%	40%	46%
Yes	3%	3%	4%	4%	2%	4%	3%
<b><i>Fever- still bothered</i></b>							
Missing	45%	53%	49%	60%	96%	57%	51%
No	55%	47%	50%	40%	4%	43%	49%
Yes	0%	0%	1%	0%	0%	0%	0%
<b><i>Cough lasting three weeks- sick call</i></b>							
Missing	24%	34%	29%	36%	92%	35%	31%
No	70%	59%	64%	58%	5%	60%	63%
Yes	6%	6%	8%	6%	3%	5%	6%
<b><i>Cough lasting three weeks- quarters/profile</i></b>							
Missing	46%	54%	51%	60%	96%	58%	52%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
No	53%	45%	48%	38%	4%	40%	47%
Yes	1%	1%	2%	2%	0%	1%	1%
<b><i>Cough lasting three weeks- still bothered</i></b>							
Missing	45%	53%	50%	60%	95%	58%	52%
No	52%	44%	47%	38%	4%	40%	46%
Yes	3%	3%	3%	2%	1%	2%	3%
<b><i>Trouble breathing- sick call</i></b>							
Missing	24%	35%	30%	37%	93%	36%	32%
No	71%	60%	65%	59%	6%	61%	64%
Yes	5%	5%	5%	4%	1%	4%	4%
<b><i>Trouble breathing- quarters/profile</i></b>							
Missing	46%	54%	52%	61%	96%	59%	52%
No	53%	45%	47%	38%	4%	40%	46%
Yes	1%	1%	2%	1%	0%	1%	1%
<b><i>Trouble breathing- still bothered</i></b>							
Missing	46%	54%	51%	61%	96%	58%	52%
No	51%	43%	45%	37%	4%	39%	45%
Yes	4%	3%	4%	2%	0%	2%	3%
<b><i>Headache- sick call</i></b>							
Missing	24%	35%	29%	36%	92%	35%	31%
No	68%	57%	62%	57%	5%	59%	61%
Yes	9%	8%	9%	7%	3%	6%	8%
<b><i>Headache- quarters/profile</i></b>							
Missing	45%	54%	51%	60%	96%	58%	52%
No	53%	45%	48%	38%	4%	40%	46%
Yes	2%	2%	2%	2%	1%	2%	2%
<b><i>Headache- still bothered</i></b>							
Missing	44%	53%	49%	60%	95%	58%	51%
No	48%	41%	43%	35%	4%	38%	42%
Yes	8%	6%	8%	5%	1%	4%	7%
<b><i>Feeling weak- sick call</i></b>							
Missing	26%	36%	32%	37%	93%	35%	33%
No	70%	60%	63%	60%	6%	61%	63%
Yes	4%	4%	5%	3%	2%	4%	4%
<b><i>Feeling weak- quarters/profile</i></b>							
Missing	48%	55%	53%	61%	96%	59%	54%
No	51%	44%	45%	38%	4%	40%	45%
Yes	1%	1%	1%	1%	1%	2%	1%
<b><i>Feeling weak- still bothered</i></b>							
Missing	48%	55%	53%	61%	96%	59%	53%
No	49%	43%	44%	37%	4%	39%	44%
Yes	3%	3%	4%	2%	1%	2%	3%
<b><i>Muscle ache- sick call</i></b>							
Missing	26%	35%	31%	36%	92%	35%	32%
No	65%	56%	59%	56%	5%	57%	59%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
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Yes	9%	9%	9%	8%	3%	8%	9%
<b><i>Muscle ache- quarters/profile</i></b>							
Missing	47%	54%	53%	60%	95%	58%	53%
No	51%	44%	45%	37%	4%	39%	45%
Yes	3%	2%	2%	3%	1%	3%	3%
<b><i>Muscle ache- still bothered</i></b>							
Missing	45%	53%	51%	59%	95%	57%	51%
No	46%	40%	40%	35%	3%	37%	41%
Yes	9%	7%	9%	6%	2%	6%	7%
<b><i>Joints- sick call</i></b>							
Missing	25%	35%	31%	35%	91%	34%	32%
No	61%	52%	57%	53%	5%	53%	56%
Yes	13%	13%	12%	12%	4%	13%	13%
<b><i>Joints- quarters/profile</i></b>							
Missing	46%	53%	52%	59%	95%	56%	51%
No	49%	43%	44%	36%	3%	38%	44%
Yes	5%	4%	4%	5%	1%	6%	5%
<b><i>Joints- still bothered</i></b>							
Missing	43%	51%	50%	57%	94%	55%	49%
No	42%	36%	36%	32%	3%	34%	37%
Yes	15%	13%	14%	11%	3%	11%	13%
<b><i>Back pain- sick call</i></b>							
Missing	25%	34%	31%	35%	91%	34%	31%
No	61%	52%	55%	54%	5%	54%	55%
Yes	14%	14%	15%	11%	4%	12%	13%
<b><i>Back pain- quarters/profile</i></b>							
Missing	45%	53%	51%	59%	95%	56%	51%
No	50%	44%	45%	37%	4%	39%	44%
Yes	5%	4%	5%	4%	1%	5%	5%
<b><i>Back pain- still bothered</i></b>							
Missing	42%	50%	48%	57%	93%	55%	49%
No	41%	36%	36%	33%	3%	35%	37%
Yes	17%	14%	16%	10%	3%	11%	14%
<b><i>Numbness in hands or feet- sick call</i></b>							
Missing	26%	36%	31%	37%	94%	35%	33%
No	68%	59%	62%	59%	5%	60%	62%
Yes	5%	5%	7%	4%	1%	5%	5%
<b><i>Numbness in hands or feet- quarters/profile</i></b>							
Missing	48%	55%	53%	61%	96%	58%	53%
No	51%	44%	46%	38%	4%	40%	45%
Yes	2%	1%	1%	1%	0%	2%	1%
<b><i>Numbness in hands or feet- still bothered</i></b>							
Missing	46%	54%	51%	60%	95%	57%	52%
No	47%	40%	41%	35%	3%	38%	42%
Yes	7%	6%	9%	5%	1%	5%	6%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
<b><i>Trouble hearing- sick call</i></b>							
Missing	26%	36%	32%	37%	94%	35%	33%
No	70%	60%	62%	61%	6%	62%	63%
Yes	4%	4%	6%	3%	1%	3%	4%
<b><i>Trouble hearing- quarters/profile</i></b>							
Missing	48%	55%	53%	61%	96%	59%	54%
No	52%	45%	46%	38%	4%	41%	46%
Yes	1%	1%	1%	1%	0%	1%	1%
<b><i>Trouble hearing- still bothered</i></b>							
Missing	47%	54%	51%	60%	96%	58%	53%
No	46%	40%	40%	36%	4%	38%	42%
Yes	7%	6%	9%	4%	1%	4%	6%
<b><i>Ringling in the ears- sick call</i></b>							
Missing	26%	36%	32%	37%	94%	35%	33%
No	70%	59%	62%	61%	6%	61%	63%
Yes	4%	5%	7%	2%	1%	3%	4%
<b><i>Ringling in the ears- quarters/profile</i></b>							
Missing	48%	55%	53%	61%	96%	59%	54%
No	51%	45%	46%	38%	4%	41%	46%
Yes	1%	1%	1%	0%	0%	1%	1%
<b><i>Ringling in the ears- still bothered</i></b>							
Missing	47%	53%	51%	61%	96%	58%	53%
No	47%	40%	41%	36%	3%	38%	42%
Yes	6%	7%	8%	4%	1%	4%	6%
<b><i>Watery, red eyes- sick call</i></b>							
Missing	26%	36%	32%	36%	93%	35%	33%
No	71%	61%	65%	61%	6%	62%	64%
Yes	3%	4%	3%	3%	1%	3%	3%
<b><i>Watery, red eyes- quarters/profile</i></b>							
Missing	48%	55%	53%	61%	96%	59%	54%
No	51%	44%	46%	38%	4%	41%	46%
Yes	0%	0%	0%	0%	0%	0%	0%
<b><i>Watery, red eyes- still bothered</i></b>							
Missing	48%	54%	53%	61%	96%	58%	53%
No	50%	43%	44%	37%	4%	40%	44%
Yes	3%	3%	3%	2%	1%	2%	3%
<b><i>Dimming of vision- sick call</i></b>							
Missing	26%	36%	32%	37%	94%	36%	33%
No	73%	63%	68%	62%	6%	64%	66%
Yes	1%	1%	1%	1%	0%	1%	1%
<b><i>Dimming of vision- quarters/profile</i></b>							
Missing	48%	56%	54%	62%	96%	59%	54%
No	51%	44%	46%	38%	4%	41%	46%
Yes	0%	0%	0%	0%	0%	0%	0%
<b><i>Dimming of vision- still bothered</i></b>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Missing	48%	55%	53%	62%	96%	59%	54%
No	51%	44%	45%	38%	4%	40%	45%
Yes	1%	1%	1%	1%	0%	1%	1%
<b><i>Chest pain or pressure- sick call</i></b>							
Missing	26%	36%	31%	37%	94%	35%	33%
No	71%	61%	66%	61%	6%	62%	64%
Yes	3%	3%	3%	3%	1%	3%	3%
<b><i>Chest pain or pressure- quarters/profile</i></b>							
Missing	48%	55%	53%	61%	96%	59%	54%
No	51%	44%	46%	38%	4%	40%	45%
Yes	1%	1%	1%	1%	0%	1%	1%
<b><i>Chest pain or pressure- still bothered</i></b>							
Missing	48%	55%	53%	61%	96%	58%	53%
No	50%	43%	44%	37%	4%	40%	44%
Yes	3%	2%	3%	1%	0%	1%	2%
<b><i>Dizzy- sick call</i></b>							
Missing	26%	36%	31%	36%	93%	35%	33%
No	71%	60%	65%	61%	6%	62%	64%
Yes	3%	3%	3%	3%	1%	3%	3%
<b><i>Dizzy- quarters/profile</i></b>							
Missing	48%	55%	54%	61%	96%	59%	54%
No	51%	44%	45%	37%	4%	40%	45%
Yes	1%	1%	1%	1%	0%	1%	1%
<b><i>Dizzy- still bothered</i></b>							
Missing	48%	55%	53%	61%	96%	59%	53%
No	50%	43%	44%	38%	4%	40%	45%
Yes	2%	2%	3%	1%	0%	1%	2%
<b><i>Diarrhea- sick call</i></b>							
Missing	24%	34%	30%	36%	91%	34%	31%
No	64%	52%	60%	58%	5%	59%	58%
Yes	12%	14%	10%	6%	3%	8%	11%
<b><i>Diarrhea- quarters/profile</i></b>							
Missing	46%	53%	52%	60%	95%	57%	52%
No	51%	44%	46%	38%	4%	40%	45%
Yes	3%	4%	2%	3%	1%	3%	3%
<b><i>Diarrhea- still bothered</i></b>							
Missing	45%	52%	51%	60%	96%	57%	51%
No	52%	45%	46%	39%	4%	41%	46%
Yes	3%	2%	3%	1%	1%	2%	3%
<b><i>Vomiting- sick call</i></b>							
Missing	26%	36%	31%	36%	93%	35%	32%
No	69%	57%	64%	60%	6%	61%	62%
Yes	5%	7%	5%	4%	2%	4%	5%
<b><i>Vomiting- quarters/profile</i></b>							
Missing	47%	54%	53%	61%	95%	58%	53%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
No	50%	42%	45%	37%	4%	39%	44%
Yes	3%	3%	2%	2%	1%	2%	3%
<b><i>Vomiting- still bothered</i></b>							
Missing	47%	54%	53%	61%	96%	59%	53%
No	52%	45%	46%	39%	4%	41%	46%
Yes	1%	0%	1%	0%	0%	0%	0%
<b><i>Frequent indigestion/heartburn- sick call</i></b>							
Missing	26%	36%	31%	37%	94%	35%	33%
No	70%	60%	65%	61%	6%	61%	64%
Yes	4%	4%	4%	3%	1%	4%	4%
<b><i>Frequent indigestion/heartburn- quarters/profile</i></b>							
Missing	48%	55%	54%	61%	96%	59%	54%
No	52%	44%	46%	38%	4%	41%	46%
Yes	0%	0%	1%	0%	0%	1%	0%
<b><i>Frequent indigestion/heartburn- still bothered</i></b>							
Missing	47%	55%	53%	61%	96%	58%	53%
No	48%	42%	44%	37%	4%	39%	43%
Yes	5%	4%	4%	3%	1%	3%	4%
<b><i>Sleeping problems/tired- sick call</i></b>							
Missing	24%	34%	29%	36%	92%	34%	31%
No	64%	54%	57%	56%	5%	57%	58%
Yes	12%	12%	14%	8%	3%	8%	11%
<b><i>Sleeping problems/tired- quarters/profile</i></b>							
Missing	45%	53%	50%	60%	96%	58%	52%
No	53%	45%	48%	39%	4%	41%	47%
Yes	1%	1%	2%	1%	0%	1%	1%
<b><i>Sleeping problems/tired- still bothered</i></b>							
Missing	42%	50%	47%	58%	94%	56%	49%
No	40%	35%	34%	32%	3%	34%	36%
Yes	18%	15%	18%	11%	3%	10%	15%
<b><i>Trouble concentrating- sick call</i></b>							
Missing	25%	36%	30%	37%	94%	35%	32%
No	71%	61%	65%	61%	6%	62%	64%
Yes	4%	3%	4%	3%	0%	3%	3%
<b><i>Trouble concentrating- quarters/profile</i></b>							
Missing	47%	55%	53%	62%	96%	59%	53%
No	52%	45%	47%	38%	4%	41%	46%
Yes	0%	0%	0%	0%	0%	0%	0%
<b><i>Trouble concentrating- still bothered</i></b>							
Missing	46%	54%	51%	61%	96%	58%	52%
No	46%	40%	41%	35%	3%	38%	41%
Yes	8%	6%	7%	4%	1%	4%	6%
<b><i>Trouble with memory- sick call</i></b>							
Missing	26%	36%	30%	37%	94%	36%	33%
No	71%	61%	65%	61%	6%	62%	64%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Yes	4%	3%	5%	2%	0%	3%	3%
<b><i>Trouble with memory- quarters/profile</i></b>							
Missing	47%	55%	52%	61%	96%	59%	53%
No	52%	45%	47%	38%	4%	41%	46%
Yes	0%	0%	0%	0%	0%	0%	0%
<b><i>Trouble with memory- still bothered</i></b>							
Missing	46%	54%	51%	61%	96%	58%	52%
No	46%	40%	40%	35%	3%	38%	41%
Yes	8%	6%	10%	4%	1%	4%	7%
<b><i>Indecisive- sick call</i></b>							
Missing	26%	36%	31%	37%	94%	35%	33%
No	73%	62%	68%	62%	6%	63%	66%
Yes	2%	1%	2%	1%	0%	1%	1%
<b><i>Indecisive- quarters/profile</i></b>							
Missing	48%	55%	53%	62%	96%	59%	54%
No	52%	44%	47%	38%	4%	41%	46%
Yes	0%	0%	0%	0%	0%	0%	0%
<b><i>Indecisive- still bothered</i></b>							
Missing	47%	55%	52%	61%	96%	59%	53%
No	49%	43%	45%	37%	4%	39%	44%
Yes	3%	2%	3%	2%	0%	2%	3%
<b><i>Increased irritability- sick call</i></b>							
Missing	25%	36%	30%	37%	94%	36%	33%
No	68%	59%	63%	60%	6%	61%	62%
Yes	6%	5%	7%	4%	0%	3%	5%
<b><i>Increased irritability- quarters/profile</i></b>							
Missing	47%	55%	52%	61%	96%	59%	53%
No	52%	45%	48%	38%	4%	41%	46%
Yes	1%	1%	1%	0%	0%	0%	1%
<b><i>Increased irritability- still bothered</i></b>							
Missing	45%	53%	50%	60%	95%	58%	51%
No	43%	38%	38%	34%	3%	37%	39%
Yes	12%	9%	12%	6%	1%	5%	10%
<b><i>Skin disease or rash- sick call</i></b>							
Missing	23%	35%	28%	35%	91%	34%	31%
No	69%	59%	64%	58%	5%	60%	62%
Yes	8%	7%	7%	6%	4%	6%	7%
<b><i>Skin disease or rash- quarters/profile</i></b>							
Missing	46%	54%	51%	61%	96%	58%	52%
No	53%	45%	49%	39%	4%	41%	47%
Yes	1%	1%	1%	1%	0%	1%	1%
<b><i>Skin disease or rash- still bothered</i></b>							
Missing	44%	53%	50%	59%	95%	57%	51%
No	50%	43%	45%	36%	4%	39%	45%
Yes	5%	4%	5%	4%	1%	4%	5%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	156751	33915	1535	15511	12988	33975	255188
<b>Other- sick call</b>							
Missing	41%	49%	43%	46%	88%	46%	46%
No	50%	43%	49%	45%	4%	46%	46%
Yes	8%	8%	9%	9%	8%	8%	8%
<b>Other- quarters/profile</b>							
Missing	57%	64%	61%	67%	95%	65%	62%
No	40%	33%	36%	30%	3%	32%	35%
Yes	3%	2%	3%	3%	2%	3%	3%
<b>Other- still bothered</b>							
Missing	56%	63%	60%	66%	94%	64%	61%
No	38%	32%	34%	29%	3%	31%	34%
Yes	6%	5%	6%	5%	3%	5%	5%
<b>9d. Have any TBI symptoms- created index*</b>							
Missing	18%	22%	22%	13%	9%	12%	17%
No	74%	69%	67%	83%	90%	84%	76%
Yes	8%	9%	11%	4%	0%	4%	7%
<b>9d. TBI symptoms- created index*</b>							
N	129161	26479	1192	13477	11784	29895	212330
Mean	0.24	0.25	0.34	0.09	0.01	0.09	0.2
Standard deviation	0.84	0.82	0.99	0.49	0.15	0.53	0.76
Median	0	0	0	0	0	0	0
Range	6	6	6	6	5	6	6
<b>9a. Experienced following event:</b>							
<b>Blast or explosion</b>							
Missing	2%	2%	3%	3%	1%	2%	2%
No	79%	74%	73%	94%	97%	94%	82%
Yes	19%	25%	24%	3%	2%	3%	16%
<b>Crash</b>							
Missing	2%	2%	4%	3%	1%	2%	2%
No	94%	92%	93%	95%	97%	95%	94%
Yes	4%	6%	4%	2%	2%	2%	4%
<b>Fragment/bullet wound (above shoulders)</b>							
Missing	2%	2%	4%	3%	1%	3%	2%
No	97%	97%	96%	97%	99%	97%	97%
Yes	0%	1%	0%	0%	0%	0%	0%
<b>Fall</b>							
Missing	2%	2%	4%	3%	1%	3%	2%
No	89%	86%	86%	92%	98%	92%	89%
Yes	9%	12%	10%	5%	2%	5%	8%
<b>Other injury</b>							
Missing	5%	5%	7%	5%	1%	4%	5%
No	88%	88%	85%	87%	94%	88%	88%
Yes	7%	7%	8%	8%	5%	8%	7%
<b>9b. Problems immediately after event (from 9a)</b>							
<b>Knocked out</b>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Missing	50%	53%	53%	76%	89%	70%	57%
No	48%	45%	46%	24%	11%	29%	42%
Yes	1%	1%	1%	0%	0%	1%	1%
<b><i>Dazed</i></b>							
Missing	50%	53%	53%	76%	89%	70%	57%
No	44%	41%	41%	22%	10%	28%	38%
Yes	6%	6%	6%	2%	1%	2%	5%
<b><i>Memory loss of event</i></b>							
Missing	50%	53%	53%	76%	89%	70%	57%
No	48%	46%	46%	24%	11%	29%	42%
Yes	1%	1%	1%	0%	0%	1%	1%
<b><i>Concussion</i></b>							
Missing	50%	53%	53%	76%	89%	70%	57%
No	48%	45%	45%	24%	11%	29%	42%
Yes	2%	2%	2%	0%	0%	1%	1%
<b><i>Head injury</i></b>							
Missing	50%	53%	53%	76%	89%	70%	57%
No	48%	45%	45%	23%	11%	29%	41%
Yes	2%	2%	2%	1%	0%	1%	2%
<b>9c. Problems got worse after event (from 9a)</b>							
<b><i>Memory lapses</i></b>							
Missing	64%	70%	67%	84%	97%	79%	70%
No	34%	28%	30%	16%	3%	20%	28%
Yes	2%	2%	3%	1%	0%	1%	2%
<b><i>Dizziness</i></b>							
Missing	64%	70%	67%	84%	97%	79%	70%
No	34%	28%	30%	16%	3%	20%	29%
Yes	2%	2%	3%	1%	0%	1%	2%
<b><i>Ring in ears</i></b>							
Missing	64%	70%	67%	84%	97%	79%	70%
No	32%	24%	28%	15%	3%	20%	27%
Yes	4%	5%	6%	1%	0%	1%	3%
<b><i>Sensitive to light</i></b>							
Missing	64%	71%	67%	84%	97%	79%	70%
No	34%	28%	31%	16%	3%	20%	29%
Yes	2%	1%	2%	1%	0%	1%	1%
<b><i>Irritability</i></b>							
Missing	64%	70%	67%	84%	97%	79%	70%
No	31%	25%	27%	15%	3%	20%	26%
Yes	4%	4%	6%	2%	0%	1%	4%
<b><i>Headaches</i></b>							
Missing	64%	70%	67%	84%	97%	79%	70%
No	31%	25%	28%	15%	2%	19%	26%
Yes	5%	4%	5%	2%	0%	2%	4%
<b><i>Sleep problems</i></b>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Missing	64%	71%	67%	84%	97%	79%	70%
No	30%	23%	26%	14%	2%	18%	25%
Yes	6%	6%	7%	3%	0%	2%	5%
<b>9d. Symptoms in past week (from 9c)</b>							
<i>Memory lapses</i>							
Missing	69%	78%	76%	89%	98%	82%	75%
No	29%	21%	21%	11%	2%	17%	24%
Yes	2%	2%	3%	1%	0%	1%	2%
<i>Dizziness</i>							
Missing	69%	78%	76%	88%	98%	82%	75%
No	30%	21%	22%	11%	2%	18%	24%
Yes	1%	1%	2%	0%	0%	1%	1%
<i>Ring in ears</i>							
Missing	69%	77%	76%	88%	98%	82%	74%
No	28%	20%	20%	11%	2%	17%	23%
Yes	3%	4%	5%	1%	0%	1%	2%
<i>Sensitive to light</i>							
Missing	69%	78%	76%	88%	98%	82%	75%
No	29%	21%	22%	11%	2%	18%	24%
Yes	1%	1%	1%	1%	0%	1%	1%
<i>Irritability</i>							
Missing	69%	77%	75%	88%	98%	82%	74%
No	27%	19%	19%	10%	2%	17%	22%
Yes	5%	4%	6%	1%	0%	2%	4%
<i>Headaches</i>							
Missing	69%	77%	75%	88%	98%	82%	74%
No	27%	19%	20%	10%	2%	17%	22%
Yes	4%	4%	4%	2%	0%	2%	3%
<i>Sleep problems</i>							
Missing	69%	77%	75%	88%	98%	82%	74%
No	26%	17%	18%	9%	2%	16%	21%
Yes	6%	6%	8%	3%	0%	3%	5%
<b>10. Encounter dead bodies or see people killed or wounded during deployment</b>							
Missing	3%	3%	2%	2%	0%	3%	3%
No	71%	56%	71%	91%	96%	90%	74%
Yes	27%	41%	27%	7%	4%	6%	23%
<i>Enemy</i>							
Missing	0%	*	*	0%	*	*	0%
Not checked	86%	75%	85%	96%	98%	97%	87%
Checked	14%	25%	15%	4%	2%	3%	13%
<i>Coalition member</i>							
Missing	*	*	*	0%	*	*	0%
Not checked	86%	74%	85%	99%	99%	98%	88%
Checked	14%	26%	15%	1%	1%	2%	12%
<i>Civilian</i>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Not checked	87%	84%	89%	96%	99%	97%	89%
Checked	13%	16%	11%	4%	1%	3%	11%
<b>11. Discharged weapon in combat</b>							
Missing	3%	3%	2%	2%	0%	3%	3%
Not checked	90%	74%	86%	97%	99%	95%	89%
Checked	8%	23%	12%	1%	1%	1%	8%
<b>On land</b>							
Not checked	94%	81%	91%	100%	100%	99%	93%
Checked	6%	19%	9%	0%	0%	1%	7%
<b>At sea</b>							
Not checked	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	*	0%	*	0%	0%
<b>In air</b>							
Not checked	99%	98%	99%	100%	99%	100%	99%
Checked	1%	2%	1%	0%	1%	0%	1%
<b>12. Felt danger of being killed</b>							
Missing	4%	3%	5%	5%	1%	5%	4%
No	71%	65%	69%	90%	97%	90%	75%
Yes	25%	31%	26%	5%	2%	5%	21%
<b>13. Any PTSD symptoms- created index*</b>							
Missing	4%	3%	5%	4%	1%	5%	4%
No	87%	86%	84%	92%	98%	92%	89%
Yes	9%	11%	11%	3%	1%	3%	8%
<b>13. PTSD symptoms- created index*</b>							
N	151165	32820	1460	14818	12890	32412	245960
Mean	0.14	0.16	0.17	0.06	0.01	0.06	0.12
Standard deviation	0.46	0.49	0.51	0.3	0.15	0.3	0.43
Median	0	0	0	0	0	0	0
Range	2	2	2	2	2	2	2
<b>13a. Nightmares about upsetting experience (past month)</b>							
Missing	4%	3%	5%	5%	1%	5%	4%
No	89%	88%	86%	93%	98%	93%	90%
Yes	7%	9%	9%	3%	1%	3%	6%
<b>13b. Tried not to think about upsetting experience (past month)</b>							
Missing	4%	3%	5%	5%	1%	5%	4%
No	90%	90%	87%	93%	99%	93%	91%
Yes	6%	7%	8%	3%	1%	3%	5%
<b>13c. Constantly on guard or easily startled (past month)</b>							
Missing	4%	3%	5%	5%	1%	5%	4%
No	86%	84%	83%	92%	99%	92%	88%
Yes	10%	13%	12%	3%	1%	3%	9%
<b>13d. Numb or detached from others (past month)</b>							
Missing	4%	3%	5%	5%	1%	5%	4%
No	89%	90%	86%	93%	98%	92%	90%
Yes	7%	7%	8%	3%	1%	3%	6%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	156751	33915	1535	15511	12988	33975	255188
<b>14. Any depressive symptoms- created index*</b>							
Missing	19%	15%	29%	33%	3%	22%	19%
No	72%	79%	62%	62%	95%	73%	74%
Yes	9%	7%	9%	5%	2%	5%	7%
<b>14. Depressive symptoms- created index*</b>							
N	127192	28908	1084	10411	12543	26510	207043
Mean	0.15	0.1	0.18	0.11	0.03	0.08	0.13
Standard deviation	0.46	0.39	0.5	0.39	0.2	0.35	0.43
Median	0	0	0	0	0	0	0
Range	2	2	2	2	2	2	2
<b>14a. Little interest in things (past month)</b>							
Missing	20%	16%	31%	34%	4%	23%	20%
Not at all	52%	62%	43%	48%	87%	63%	56%
Few or several days	21%	17%	19%	14%	8%	11%	18%
More than half the days	5%	3%	5%	3%	1%	2%	4%
Nearly every day	3%	2%	3%	1%	0%	1%	2%
<b>14b. Feeling down or hopeless (past month)</b>							
Missing	21%	16%	31%	35%	4%	23%	20%
Not at all	54%	63%	44%	48%	88%	62%	58%
Few or several days	20%	16%	20%	14%	8%	11%	17%
More than half the days	3%	3%	4%	2%	1%	2%	3%
Nearly every day	2%	1%	2%	1%	0%	1%	2%
<b>15. Alcohol problems- created index*</b>							
Missing	5%	4%	15%	7%	1%	6%	5%
No	65%	67%	56%	68%	80%	67%	67%
Yes	30%	28%	28%	26%	19%	27%	28%
<b>15a. Used alcohol more than meant to (past month)</b>							
Missing	3%	3%	5%	5%	1%	5%	4%
No	94%	95%	92%	93%	99%	93%	94%
Yes	3%	2%	3%	2%	1%	3%	2%
<b>15b. Wanted or needed to cut down on alcohol (past month)</b>							
Missing	4%	3%	5%	5%	1%	5%	4%
No	94%	95%	92%	93%	99%	93%	94%
Yes	3%	2%	3%	2%	0%	3%	2%
<b>15c. How often drink alcohol</b>							
Missing	14%	10%	22%	15%	2%	10%	12%
Never	33%	33%	24%	30%	21%	21%	31%
Monthly or less	19%	22%	20%	28%	36%	29%	22%
2 to 4 times a month	18%	19%	18%	17%	28%	26%	20%
2 to 3 times a week	12%	12%	10%	7%	12%	12%	11%
4 or more times a week	5%	4%	5%	2%	2%	3%	4%
<b>15d. How many drinks per day when drinking</b>							
Missing	51%	44%	53%	54%	17%	41%	47%
1 or 2	24%	32%	22%	25%	61%	39%	29%
3 or 4	15%	16%	16%	14%	20%	14%	15%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
5 or 6	6%	5%	5%	4%	1%	4%	5%
7 to 9	2%	2%	2%	2%	0%	1%	2%
10 or more	2%	1%	2%	0%	0%	1%	1%
<b>15e. How often six or more drinks on one occasion</b>							
Missing	22%	22%	30%	18%	2%	17%	20%
Never	29%	32%	27%	31%	71%	37%	33%
Less than monthly	27%	27%	24%	27%	22%	28%	27%
Monthly	12%	11%	11%	15%	4%	12%	12%
Weekly	7%	6%	6%	7%	1%	5%	6%
Daily	2%	2%	2%	2%	0%	2%	2%
<b>16-19. Have any exposure concerns- created index*</b>							
Missing	0%	0%	0%	0%	0%	0%	0%
No	47%	47%	47%	62%	75%	71%	53%
Yes	53%	52%	53%	38%	25%	29%	47%
<b>16-19. Exposure concerns- created index*</b>							
N	156399	33868	1533	15498	12987	33891	254689
Mean	2.74	2.65	2.93	1.43	0.84	1.15	2.34
Standard deviation	4.02	3.89	4.14	2.8	1.97	2.62	3.76
Median	1	1	1	0	0	0	0
Range	21	21	21	21	20	21	21
<b>16. Reported exposure concerns</b>							
<i>Animal bites</i>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	96%	97%	96%	98%	100%	97%	97%
Yes	1%	1%	1%	1%	0%	1%	1%
<i>Animal bodies (dead)</i>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	93%	94%	93%	98%	100%	96%	94%
Yes	4%	4%	5%	1%	0%	2%	4%
<i>Chlorine gas</i>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	96%	97%	97%	97%	100%	98%	97%
Yes	1%	1%	1%	2%	0%	0%	1%
<i>Depleted uranium</i>							
Missing	2%	2%	2%	1%	0%	2%	2%
No	96%	97%	97%	98%	100%	98%	97%
Yes	1%	1%	1%	1%	0%	0%	1%
<i>Excessive vibration</i>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	88%	89%	86%	94%	96%	95%	90%
Yes	9%	9%	12%	5%	4%	3%	8%
<i>Fog oils</i>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	92%	94%	92%	96%	100%	96%	94%
Yes	5%	4%	5%	2%	0%	2%	4%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	156751	33915	1535	15511	12988	33975	255188
<b>Garbage</b>							
Missing	2%	2%	2%	1%	0%	2%	2%
No	80%	81%	79%	92%	97%	91%	83%
Yes	18%	17%	18%	6%	3%	8%	15%
<b>Human blood/bodily fluids/bodies</b>							
Missing	3%	2%	2%	1%	0%	2%	2%
No	91%	89%	91%	97%	99%	96%	92%
Yes	6%	9%	6%	2%	1%	2%	6%
<b>Industrial pollution</b>							
Missing	2%	2%	2%	1%	0%	2%	2%
No	81%	84%	81%	88%	96%	90%	84%
Yes	16%	14%	16%	11%	3%	8%	14%
<b>Insect bites</b>							
Missing	2%	2%	3%	1%	0%	2%	2%
No	82%	84%	83%	92%	96%	89%	84%
Yes	16%	14%	15%	7%	4%	9%	14%
<b>Ionizing radiation</b>							
Missing	3%	3%	3%	1%	0%	2%	3%
No	95%	96%	96%	98%	99%	97%	96%
Yes	2%	1%	1%	1%	0%	1%	1%
<b>JP8/other fuels</b>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	82%	82%	79%	88%	91%	91%	84%
Yes	15%	15%	18%	10%	8%	7%	14%
<b>Lasers</b>							
Missing	3%	2%	3%	2%	0%	2%	3%
No	92%	93%	92%	97%	99%	96%	94%
Yes	5%	4%	5%	1%	1%	1%	4%
<b>Loud noises</b>							
Missing	2%	2%	2%	1%	0%	2%	2%
No	71%	68%	65%	83%	85%	85%	74%
Yes	26%	30%	33%	16%	15%	13%	24%
<b>Paints</b>							
Missing	3%	2%	3%	2%	0%	2%	3%
No	91%	92%	91%	95%	98%	94%	92%
Yes	6%	6%	6%	4%	2%	3%	5%
<b>Pesticides</b>							
Missing	3%	2%	3%	2%	0%	2%	3%
No	91%	92%	92%	96%	99%	94%	92%
Yes	6%	5%	5%	2%	1%	4%	5%
<b>Radar/microwaves</b>							
Missing	3%	2%	2%	2%	0%	2%	3%
No	89%	91%	90%	95%	96%	95%	91%
Yes	8%	7%	8%	3%	4%	3%	6%
<b>Sand/dust</b>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Missing	2%	2%	2%	1%	0%	2%	2%
No	59%	62%	59%	70%	82%	85%	65%
Yes	39%	36%	39%	29%	18%	12%	33%
<b><i>Smoke: burning trash or feces</i></b>							
Missing	2%	2%	2%	1%	0%	2%	2%
No	65%	66%	64%	93%	97%	85%	71%
Yes	32%	32%	33%	6%	3%	12%	27%
<b><i>Smoke: oil fire</i></b>							
Missing	3%	2%	3%	1%	0%	2%	2%
No	88%	92%	89%	93%	99%	95%	90%
Yes	10%	6%	9%	5%	1%	3%	8%
<b><i>Solvents</i></b>							
Missing	3%	2%	3%	1%	0%	2%	3%
No	91%	92%	90%	95%	98%	95%	92%
Yes	6%	6%	7%	4%	2%	3%	5%
<b><i>Smoke: tent heater</i></b>							
Missing	3%	2%	3%	1%	0%	2%	3%
No	95%	94%	94%	97%	100%	97%	96%
Yes	2%	4%	3%	1%	0%	1%	2%
<b><i>Exhaust fumes</i></b>							
Missing	3%	2%	2%	1%	0%	2%	2%
No	81%	80%	78%	88%	93%	90%	83%
Yes	16%	18%	19%	10%	7%	8%	14%
<b><i>Other</i></b>							
Missing	6%	6%	5%	4%	0%	5%	6%
No	90%	91%	91%	93%	97%	93%	91%
Yes	3%	4%	4%	3%	3%	2%	3%
<b>17. Exposed to chemical or hazard requiring immediate medical attention</b>							
Missing	2%	1%	3%	3%	1%	2%	2%
No	97%	98%	95%	96%	99%	97%	97%
Yes	1%	1%	2%	1%	1%	1%	1%
<b>18. Enter or closely inspect any destroyed military vehicles</b>							
Missing	2%	1%	4%	3%	1%	2%	2%
No	86%	83%	83%	91%	97%	96%	87%
Yes	13%	16%	13%	6%	2%	2%	11%
<b>19. Think exposed to chemical or biological warfare agents</b>							
Missing	2%	1%	3%	3%	1%	2%	2%
No	84%	86%	82%	88%	95%	92%	86%
Yes	1%	0%	0%	0%	0%	0%	1%
Don't Know	13%	12%	14%	8%	4%	5%	11%
<b>20. Indoor contact with local or 3rd country nationals</b>							
Missing	20%	22%	18%	14%	9%	14%	19%
Minimal	29%	26%	29%	39%	45%	50%	33%
Moderate	31%	32%	33%	33%	35%	22%	30%
Extensive	20%	21%	20%	14%	10%	13%	18%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	156751	33915	1535	15511	12988	33975	255188
<b>21. How often used following:</b>							
<i><b>DEET</b></i>							
Missing	4%	4%	8%	7%	10%	6%	5%
Daily	2%	3%	2%	1%	1%	4%	2%
Most days	3%	4%	3%	1%	1%	4%	3%
Some days	23%	23%	20%	13%	10%	21%	21%
Never	54%	52%	49%	55%	54%	40%	52%
Not available	2%	2%	3%	2%	1%	1%	2%
Not required	13%	12%	15%	21%	22%	24%	15%
<i><b>Pesticide-treated uniforms</b></i>							
Missing	5%	4%	9%	7%	11%	7%	5%
Daily	11%	15%	13%	13%	8%	7%	11%
Most days	4%	7%	5%	3%	2%	2%	4%
Some days	11%	16%	11%	8%	6%	6%	10%
Never	53%	45%	46%	47%	50%	46%	51%
Not available	3%	3%	4%	2%	2%	3%	3%
Not required	12%	11%	13%	19%	22%	29%	15%
<i><b>Eye protection</b></i>							
Missing	3%	3%	7%	5%	8%	6%	4%
Daily	55%	44%	46%	24%	18%	22%	45%
Most days	12%	16%	16%	14%	9%	10%	12%
Some days	15%	19%	16%	28%	17%	20%	17%
Never	11%	13%	10%	19%	30%	23%	14%
Not available	0%	0%	1%	0%	1%	1%	0%
Not required	4%	5%	4%	9%	17%	19%	7%
<i><b>Hearing protection</b></i>							
Missing	3%	2%	6%	5%	5%	5%	4%
Daily	20%	25%	26%	15%	29%	17%	20%
Most days	13%	16%	18%	10%	14%	11%	13%
Some days	42%	37%	35%	38%	20%	32%	38%
Never	16%	14%	10%	21%	19%	19%	17%
Not available	0%	1%	1%	0%	0%	1%	0%
Not required	5%	5%	4%	11%	12%	17%	7%
<i><b>N-95 or other respirator (not gas mask)</b></i>							
Missing	5%	5%	9%	7%	11%	7%	6%
Daily	0%	0%	1%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	0%	0%	0%
Some days	2%	2%	3%	3%	2%	3%	2%
Never	71%	68%	64%	63%	57%	54%	67%
Not available	3%	3%	4%	2%	1%	2%	3%
Not required	18%	21%	19%	24%	29%	33%	21%
<i><b>Pills to stay awake</b></i>							
Missing	5%	4%	8%	7%	11%	7%	5%
Daily	1%	0%	1%	0%	0%	1%	1%
Most days	1%	1%	1%	1%	0%	0%	1%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Some days	5%	5%	5%	3%	2%	2%	5%
Never	72%	71%	67%	66%	60%	57%	69%
Not available	2%	2%	2%	1%	1%	1%	2%
Not required	14%	17%	16%	22%	26%	31%	18%
<b><i>Anti-NBC meds</i></b>							
Missing	5%	4%	9%	7%	11%	7%	6%
Daily	0%	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	0%	0%	0%
Some days	0%	0%	0%	0%	0%	0%	0%
Never	76%	73%	70%	68%	60%	58%	72%
Not available	2%	2%	2%	1%	1%	1%	2%
Not required	17%	20%	19%	24%	28%	34%	20%
<b><i>Pyridostigmine (nerve agent pill)</i></b>							
Missing	5%	4%	9%	7%	11%	7%	6%
Daily	0%	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	*	0%	0%
Some days	0%	0%	*	0%	0%	0%	0%
Never	76%	74%	70%	68%	60%	58%	72%
Not available	2%	2%	2%	1%	1%	1%	2%
Not required	17%	20%	19%	24%	28%	34%	20%
<b><i>Nerve agent antidote injector</i></b>							
Missing	5%	5%	9%	7%	11%	7%	6%
Daily	0%	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	*	0%	0%
Some days	0%	0%	*	0%	0%	0%	0%
Never	77%	74%	70%	68%	60%	58%	72%
Not available	2%	2%	2%	1%	1%	1%	1%
Not required	17%	20%	18%	24%	28%	34%	20%
<b><i>Seizure/convulsion antidote injector</i></b>							
Missing	5%	5%	9%	7%	11%	7%	6%
Daily	0%	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	*	0%	0%
Some days	0%	0%	*	0%	0%	0%	0%
Never	77%	74%	70%	68%	60%	58%	72%
Not available	2%	1%	2%	1%	1%	1%	1%
Not required	17%	20%	19%	24%	28%	33%	20%
<b><i>NBC gas mask</i></b>							
Missing	5%	4%	9%	7%	11%	7%	6%
Daily	0%	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	0%	0%	0%
Some days	2%	1%	1%	5%	10%	5%	3%
Never	78%	75%	71%	66%	56%	56%	73%
Not available	1%	1%	1%	1%	0%	1%	1%
Not required	15%	18%	17%	21%	23%	31%	18%
<b><i>MOPP over garments</i></b>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Missing	5%	5%	9%	7%	11%	7%	6%
Daily	0%	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	0%	0%	0%
Some days	1%	0%	0%	2%	1%	3%	1%
Never	78%	76%	71%	69%	61%	57%	73%
Not available	1%	1%	1%	1%	1%	1%	1%
Not required	15%	18%	18%	22%	26%	32%	19%
<b>22. Received any of following vaccinations:</b>							
<i>Smallpox</i>							
Missing	0%	0%	*	0%	0%	*	0%
Not checked	55%	60%	65%	54%	66%	73%	59%
Checked	45%	40%	35%	46%	34%	27%	41%
<i>Anthrax</i>							
Missing	0%	*	*	0%	*	*	0%
Not checked	13%	19%	19%	17%	17%	50%	19%
Checked	87%	81%	81%	83%	83%	50%	81%
<i>Botulism</i>							
Missing	*	*	*	0%	*	*	0%
Not checked	98%	98%	98%	99%	100%	99%	98%
Checked	2%	2%	2%	1%	0%	1%	2%
<i>Typhoid</i>							
Not checked	57%	60%	60%	62%	64%	72%	60%
Checked	43%	40%	40%	38%	36%	28%	40%
<i>Meningococcal</i>							
Not checked	93%	92%	92%	92%	96%	94%	93%
Checked	7%	8%	8%	8%	4%	6%	7%
<i>Yellow fever</i>							
Not checked	88%	87%	84%	87%	93%	89%	88%
Checked	12%	13%	16%	13%	7%	11%	12%
<i>Other</i>							
Not checked	88%	88%	92%	83%	88%	87%	88%
Checked	12%	12%	8%	17%	12%	13%	12%
<i>None</i>							
Missing	0%	0%	*	0%	0%	*	0%
Not checked	98%	97%	97%	98%	96%	85%	96%
Checked	2%	3%	3%	2%	4%	15%	4%
<i>Don't know</i>							
Missing	0%	*	*	0%	*	*	0%
Not checked	85%	81%	86%	89%	93%	79%	85%
Checked	15%	19%	14%	11%	7%	21%	15%
<b>23. Told to take medicines to prevent malaria</b>							
Missing	2%	3%	4%	4%	4%	4%	3%
No	96%	2%	32%	82%	92%	79%	80%
Yes	2%	95%	64%	14%	4%	17%	18%
<b>Took any of the following anti-malarial medicines:</b>							

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
<b><i>Chloroquine (Aralen®)</i></b>							
Missing	92%	85%	90%	93%	99%	90%	91%
No	8%	14%	9%	7%	1%	10%	8%
Yes	0%	1%	1%	0%	0%	1%	0%
<b><i>Doxycycline (Vibramycin®)</i></b>							
Missing	92%	51%	75%	92%	98%	87%	86%
No	8%	12%	8%	7%	1%	9%	8%
Yes	1%	37%	17%	1%	1%	3%	6%
<b><i>Mefloquine (Lariam®)</i></b>							
Missing	92%	64%	87%	93%	99%	88%	88%
No	8%	13%	8%	7%	1%	9%	8%
Yes	0%	23%	5%	0%	0%	3%	4%
<b><i>Primaquine</i></b>							
Missing	92%	80%	89%	93%	99%	89%	91%
No	8%	13%	9%	7%	1%	10%	8%
Yes	0%	6%	2%	1%	1%	1%	1%
<b><i>Other</i></b>							
Missing	93%	87%	92%	94%	99%	91%	92%
No	7%	12%	8%	6%	1%	9%	7%
Yes	0%	1%	0%	0%	0%	0%	0%
<b>24-27. Any requests for support- created index*</b>							
Missing	1%	1%	3%	2%	1%	2%	1%
No	77%	79%	76%	82%	95%	83%	79%
Yes	22%	20%	21%	16%	5%	15%	20%
<b>24-27. Requests for support- created index*</b>							
N	154899	33648	1496	15186	12877	33360	251860
Mean	0.32	0.27	0.32	0.22	0.06	0.2	0.28
Standard deviation	0.69	0.64	0.71	0.6	0.28	0.56	0.65
Median	0	0	0	0	0	0	0
Range	4	4	4	4	4	4	4
<b>24. Request healthcare visit</b>							
Missing	1%	1%	3%	2%	1%	2%	1%
No	79%	82%	79%	84%	95%	85%	81%
Yes	19%	18%	18%	14%	4%	13%	17%
<b>25. Request information on or assistance for stress, emotional or alcohol concern</b>							
Missing	1%	1%	3%	2%	1%	2%	1%
No	93%	94%	91%	94%	99%	95%	93%
Yes	6%	5%	7%	4%	1%	3%	5%
<b>26. Request help for family or relationship concern</b>							
Missing	1%	1%	3%	2%	1%	2%	2%
No	94%	96%	93%	95%	99%	96%	95%
Yes	4%	3%	4%	3%	1%	2%	4%
<b>27. Request to see chaplain or community support counselor</b>							
Missing	1%	1%	3%	2%	1%	2%	1%
No	97%	98%	95%	96%	99%	97%	97%

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Questions in SM portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	156751	33915	1535	15511	12988	33975	255188
Yes	2%	1%	2%	1%	0%	1%	1%

*\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.*

*\*\*There were 513 SMs who did not indicate a deployment location and are not included in this appendix.*

*\*\*\*Note: Asterisks indicate that there were no SMs endorsing the response.*

**Table M.2 January 2008 DD Form 2796 Items – Descriptive Statistics by Deployment Location**

Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	156751	33915	1535	15511	12988	33975	255188
<b>1. Medical or dental problems</b>							
Missing	3%	1%	3%	1%	0%	1%	2%
No	66%	70%	70%	72%	89%	70%	69%
Yes	31%	29%	27%	27%	10%	29%	29%
<b>1. Still bothered by medical or dental problems</b>							
Missing	67%	68%	71%	71%	80%	67%	68%
No	10%	11%	8%	11%	15%	14%	11%
Yes	23%	21%	20%	18%	5%	19%	21%
<b>2. Currently on profile or light duty</b>							
Missing	3%	1%	4%	1%	0%	1%	2%
No	89%	93%	90%	92%	98%	88%	90%
Yes	8%	6%	7%	7%	2%	10%	8%
<b>2. Condition due to injury or illness during deployment</b>							
Missing	47%	38%	30%	23%	3%	30%	39%
No	5%	4%	5%	5%	2%	5%	5%
Yes	5%	3%	4%	3%	1%	6%	4%
NA	43%	55%	61%	69%	95%	59%	51%
<b>2. Similar problems prior to deployment</b>							
Missing	47%	38%	30%	23%	3%	30%	39%
No	4%	3%	5%	4%	1%	5%	4%
Yes	5%	4%	4%	4%	1%	6%	5%
NA	44%	55%	61%	69%	95%	60%	52%
<b>2. Condition worsen during deployment</b>							
Missing	47%	38%	30%	23%	3%	30%	40%
No	3%	3%	4%	3%	2%	4%	3%
Yes	4%	3%	3%	3%	0%	4%	4%
NA	46%	56%	63%	71%	95%	62%	54%
<b>3a. Thoughts of harming self (past month)</b>							
Missing	3%	1%	4%	1%	0%	1%	2%
No	97%	98%	95%	99%	100%	99%	97%
Yes	0%	0%	0%	0%	0%	0%	0%
<b>3a. How often bothered by thoughts of harming self</b>							
Missing	100%	100%	100%	100%	100%	100%	100%

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
A few days	0%	0%	0%	0%	0%	0%	0%
More than half of the time	0%	0%	0%	0%	0%	0%	0%
Nearly every day	0%	0%	0%	0%	0%	0%	0%
<b>3b. Thoughts of hurting/losing control with someone</b>							
Missing	4%	2%	5%	1%	0%	2%	3%
No	94%	96%	94%	98%	99%	97%	95%
Yes	1%	1%	1%	1%	0%	1%	1%
Unsure	0%	1%	1%	0%	0%	0%	0%
<b>4a. Provider determined risk to self or others</b>							
Missing	84%	86%	89%	92%	88%	85%	85%
No	16%	14%	11%	8%	12%	15%	15%
Yes	0%	0%	*	0%	0%	0%	0%
Unsure	0%	0%	0%	0%	0%	0%	0%
<b>4b. Outcome of risk assessment</b>							
Missing	91%	90%	93%	94%	94%	90%	91%
Immediate referral	0%	0%	0%	0%	0%	0%	0%
Routine follow-up referral	1%	1%	1%	1%	0%	1%	1%
Referral not indicated	8%	9%	6%	5%	6%	9%	8%
<b>5. Alcohol screening result</b>							
Missing	17%	12%	28%	25%	3%	16%	16%
No evidence	64%	70%	51%	54%	86%	65%	66%
Evidence	19%	18%	21%	21%	11%	19%	19%
<b>5. Alcohol PCM referral indicated</b>							
Missing	17%	12%	28%	25%	3%	16%	16%
No	74%	80%	61%	70%	96%	78%	76%
Yes	9%	8%	12%	5%	2%	7%	8%
<b>6. Sought/seeking counseling for mental health</b>							
Missing	5%	3%	6%	2%	0%	4%	4%
No	87%	90%	87%	93%	98%	91%	89%
Yes	8%	6%	7%	4%	1%	5%	7%
<b>7. TBI risk assessment</b>							
Missing	22%	15%	35%	37%	4%	23%	22%
No evidence	69%	77%	55%	59%	96%	73%	72%
Evidence	8%	8%	11%	5%	0%	4%	7%
<b>7. TBI referral indicated</b>							
Missing	22%	15%	35%	37%	4%	23%	22%
No	71%	79%	57%	59%	96%	74%	73%
Yes	6%	6%	8%	4%	0%	3%	5%
<b>8. Clinician assessment of tuberculosis risk</b>							
Missing	21%	11%	30%	36%	4%	22%	20%
No evidence	47%	49%	39%	43%	79%	58%	50%
Evidence	33%	40%	30%	22%	17%	20%	31%
<b>8. Clinician TB PCM Referral</b>							
Missing	21%	11%	30%	36%	4%	22%	20%

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
No	50%	55%	47%	46%	80%	60%	53%
Yes	29%	34%	23%	18%	16%	18%	27%
<b>9. Clinician assessment of depleted uranium risk</b>							
Missing	22%	14%	36%	37%	4%	24%	21%
No evidence	71%	76%	56%	58%	96%	75%	72%
Evidence	7%	10%	8%	5%	0%	2%	6%
<b>9. Clinician depleted uranium referral</b>							
Missing	22%	14%	36%	37%	4%	24%	21%
No	73%	80%	59%	59%	96%	75%	74%
Yes	5%	6%	6%	3%	0%	1%	5%
<b>10. Concerns about exposures</b>							
Missing	3%	1%	4%	1%	0%	1%	2%
No	78%	82%	81%	87%	96%	88%	81%
Yes	19%	17%	14%	12%	3%	10%	16%
<b>11. Concerns about your health</b>							
Missing	3%	1%	4%	1%	0%	2%	3%
No	76%	79%	79%	84%	97%	82%	79%
Yes	21%	19%	17%	15%	2%	16%	19%
<b>11. Any clinician major concern- created index*</b>							
No	92%	92%	89%	94%	99%	92%	93%
Yes	8%	8%	11%	6%	1%	8%	7%
<b>11. Number of major concerns- created index*</b>							
N	156751	33915	1535	15511	12988	33975	255188
Mean	0.11	0.1	0.13	0.07	0.01	0.1	0.1
Standard deviation	0.41	0.4	0.42	0.32	0.12	0.37	0.39
Median	0	0	0	0	0	0	0
Range	9	7	4	6	3	7	9
<b>11. Physical symptoms</b>							
<i>Clinician concern</i>							
No concern	80%	83%	84%	85%	97%	83%	82%
Minor concern	14%	12%	10%	11%	3%	11%	12%
Major concern	6%	5%	6%	4%	1%	6%	5%
<i>SM already under care</i>							
Missing	77%	80%	78%	81%	97%	82%	80%
No	11%	10%	10%	8%	1%	6%	10%
Yes	11%	9%	13%	10%	2%	12%	11%
<b>11. Exposure symptoms</b>							
<i>Clinician concern</i>							
No concern	93%	93%	96%	97%	99%	97%	94%
Minor concern	6%	6%	4%	3%	1%	3%	5%
Major concern	1%	1%	1%	0%	0%	0%	0%
<i>SM already under care</i>							
Missing	92%	93%	92%	97%	99%	97%	94%
No	7%	6%	6%	3%	1%	3%	6%
Yes	1%	1%	3%	0%	0%	1%	1%
<b>11. Environmental symptoms</b>							

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
<b><i>Clinician concern</i></b>							
No concern	96%	96%	95%	98%	99%	99%	97%
Minor concern	4%	4%	4%	2%	1%	1%	3%
Major concern	0%	0%	1%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	95%	97%	94%	99%	100%	99%	96%
No	4%	2%	3%	1%	0%	1%	3%
Yes	0%	1%	3%	0%	0%	0%	0%
<b>11. Occupational symptoms</b>							
<b><i>Clinician concern</i></b>							
No concern	98%	99%	97%	99%	100%	99%	98%
Minor concern	2%	1%	1%	1%	0%	1%	1%
Major concern	0%	0%	2%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	98%	99%	96%	99%	100%	99%	98%
No	2%	1%	0%	1%	0%	0%	1%
Yes	0%	0%	4%	0%	0%	0%	0%
<b>11. Combat/mission-related symptoms</b>							
<b><i>Clinician concern</i></b>							
No concern	96%	95%	97%	99%	100%	98%	97%
Minor concern	4%	4%	2%	1%	0%	1%	3%
Major concern	0%	1%	1%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	96%	95%	94%	99%	100%	99%	97%
No	3%	4%	2%	1%	0%	1%	3%
Yes	1%	1%	4%	0%	0%	0%	1%
<b>11. Depression symptoms</b>							
<b><i>Clinician concern</i></b>							
No concern	95%	95%	97%	98%	100%	97%	96%
Minor concern	4%	4%	2%	2%	0%	2%	3%
Major concern	1%	1%	1%	1%	0%	1%	1%
<b><i>SM already under care</i></b>							
Missing	95%	95%	94%	97%	100%	97%	96%
No	4%	4%	4%	2%	0%	2%	3%
Yes	1%	1%	1%	1%	0%	1%	1%
<b>11. PTSD symptoms</b>							
<b><i>Clinician concern</i></b>							
No concern	96%	95%	98%	99%	100%	98%	97%
Minor concern	3%	4%	2%	1%	0%	2%	3%
Major concern	1%	1%	0%	0%	0%	1%	1%
<b><i>SM already under care</i></b>							
Missing	96%	95%	98%	99%	100%	98%	97%
No	3%	4%	2%	1%	0%	1%	3%
Yes	1%	1%	1%	0%	0%	1%	1%
<b>11. Anger/aggression symptoms</b>							

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
<b><i>Clinician concern</i></b>							
No concern	99%	99%	99%	99%	100%	99%	99%
Minor concern	1%	1%	1%	0%	0%	0%	1%
Major concern	0%	0%	0%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	98%	99%	99%	99%	100%	99%	99%
No	1%	1%	1%	0%	0%	1%	1%
Yes	1%	0%	0%	0%	0%	0%	0%
<b>11. Suicidal ideation</b>							
<b><i>Clinician concern</i></b>							
No concern	100%	100%	100%	100%	100%	100%	100%
Minor concern	0%	0%	*	0%	0%	0%	0%
Major concern	0%	0%	*	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	100%	100%	100%	100%	100%	100%	100%
No	0%	0%	*	0%	0%	0%	0%
Yes	0%	0%	*	0%	0%	0%	0%
<b>11. Social/family conflict</b>							
<b><i>Clinician concern</i></b>							
No concern	99%	99%	99%	100%	100%	99%	99%
Minor concern	1%	1%	0%	0%	0%	0%	0%
Major concern	0%	0%	0%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	99%	99%	99%	99%	100%	99%	99%
No	1%	1%	1%	1%	0%	0%	1%
Yes	0%	0%	0%	0%	0%	0%	0%
<b>11. Alcohol use</b>							
<b><i>Clinician concern</i></b>							
No concern	99%	99%	98%	99%	99%	99%	99%
Minor concern	1%	1%	1%	1%	1%	1%	1%
Major concern	0%	0%	1%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	98%	99%	95%	98%	100%	98%	98%
No	2%	1%	4%	2%	0%	2%	2%
Yes	0%	0%	1%	0%	*	0%	0%
<b>11. Other</b>							
<b><i>Clinician concern</i></b>							
No concern	99%	99%	99%	98%	100%	99%	99%
Minor concern	1%	1%	1%	2%	0%	1%	1%
Major concern	0%	0%	0%	0%	0%	0%	0%
<b><i>SM already under care</i></b>							
Missing	99%	98%	98%	98%	100%	99%	99%
No	1%	1%	1%	2%	0%	1%	1%
Yes	0%	0%	0%	1%	0%	1%	0%
<b>12. Number of referrals- created index*</b>							

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
N	156751	33915	1535	15511	12988	33975	255188
Mean	0.46	0.42	0.48	0.34	0.07	0.29	0.4
Standard deviation	0.78	0.79	0.82	0.68	0.31	0.65	0.75
Median	0	0	0	0	0	0	0
Range	8	10	6	6	5	24	24
<b>12. Any referral- created index*</b>							
No	67%	71%	67%	74%	94%	78%	71%
Yes	33%	29%	33%	26%	6%	22%	29%
<b>12. Received medical referral (a-d)- created index*</b>							
No	72%	75%	73%	80%	95%	83%	76%
Yes	28%	25%	27%	20%	5%	17%	24%
<b>12. Primary care (a)- created index*</b>							
No	82%	84%	83%	86%	96%	88%	84%
Yes	18%	16%	17%	14%	4%	12%	16%
<b>12. Behavioral care (b,c)- created index*</b>							
No	94%	95%	92%	96%	99%	97%	95%
Yes	6%	5%	8%	4%	1%	3%	5%
<b>12. Specialty physical care (d)- created index*</b>							
No	90%	89%	91%	94%	99%	94%	91%
Yes	10%	11%	9%	6%	1%	6%	9%
<b>12. Military OneSource (j)- created index*</b>							
No	99%	99%	100%	99%	100%	99%	99%
Yes	1%	1%	0%	1%	0%	1%	1%
<b>12. Other non-medical referral (e-k, except j)- created index*</b>							
No	93%	95%	91%	95%	100%	95%	94%
Yes	7%	5%	9%	5%	0%	5%	6%
<b>12. Referral indicated</b>							
<b>Primary care</b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	3%	2%	3%	2%	1%	2%	3%
Within 30 days	15%	13%	14%	12%	3%	10%	13%
No Referral	82%	84%	83%	86%	96%	88%	84%
<b>Behavioral health primary care</b>							
Within 24 hours	1%	0%	0%	0%	0%	0%	1%
Within 7 days	1%	1%	1%	0%	0%	0%	1%
Within 30 days	1%	1%	3%	1%	0%	1%	1%
No Referral	97%	98%	96%	98%	100%	99%	98%
<b>Mental health specialty care</b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	1%	1%	1%	0%	0%	1%	1%
Within 30 days	2%	2%	3%	1%	0%	1%	2%
No Referral	97%	97%	96%	98%	100%	98%	97%
<b>Audiology</b>							
Within 24 hours	0%	0%	*	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	3%	2%	1%	0%	1%	1%

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
No Referral	98%	96%	98%	99%	100%	99%	98%
<b>Cardiology</b>							
Within 24 hours	0%	0%	*	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Dental</b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	0%	1%	0%	0%	0%	0%	0%
Within 30 days	2%	2%	1%	1%	0%	1%	2%
No Referral	98%	97%	99%	99%	100%	99%	98%
<b>Dermatology</b>							
Within 24 hours	0%	0%	*	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	1%	1%	0%	0%	0%	1%
No Referral	99%	99%	99%	99%	100%	100%	99%
<b>ENT</b>							
Within 24 hours	0%	*	0%	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	99%	100%	100%	100%	100%
<b>GI</b>							
Within 24 hours	0%	*	*	0%	0%	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Internal medicine</b>							
Within 24 hours	0%	0%	*	0%	0%	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	*	0%	*	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Neurology</b>							
Within 24 hours	0%	0%	*	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	1%	0%	0%	0%	0%	0%	0%
No Referral	99%	99%	99%	100%	100%	100%	99%
<b>OB/GYN</b>							
Within 24 hours	0%	0%	*	*	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Ophthalmology</b>							
Within 24 hours	0%	0%	*	*	0%	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Optometry</i></b>							
Within 24 hours	0%	0%	*	*	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	99%	100%	100%	100%	100%	100%
<b><i>Orthopedics</i></b>							
Within 24 hours	0%	0%	*	0%	0%	0%	0%
Within 7 days	1%	0%	1%	0%	0%	1%	1%
Within 30 days	3%	2%	2%	2%	0%	2%	2%
No Referral	96%	97%	97%	98%	99%	98%	97%
<b><i>Pulmonology</i></b>							
Within 24 hours	0%	0%	*	*	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Urology</i></b>							
Within 24 hours	0%	0%	*	*	*	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	1%	0%	0%	0%	0%
No Referral	100%	100%	99%	100%	100%	100%	100%
<b><i>Case manager</i></b>							
Within 24 hours	0%	0%	*	0%	0%	0%	0%
Within 7 days	0%	0%	*	0%	*	0%	0%
Within 30 days	0%	0%	0%	0%	*	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Substance abuse program</i></b>							
Within 24 hours	0%	0%	0%	0%	*	0%	0%
Within 7 days	0%	0%	*	0%	0%	0%	0%
Within 30 days	0%	0%	3%	0%	0%	0%	0%
No Referral	99%	100%	96%	100%	100%	100%	100%
<b><i>Health education</i></b>							
Within 24 hours	0%	0%	0%	*	*	*	0%
Within 7 days	0%	0%	*	0%	*	0%	0%
Within 30 days	0%	0%	*	0%	*	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Chaplain</i></b>							
Within 24 hours	0%	0%	*	*	*	0%	0%
Within 7 days	0%	0%	*	0%	*	0%	0%
Within 30 days	0%	0%	1%	0%	*	0%	0%
No Referral	100%	100%	99%	100%	100%	100%	100%
<b><i>Family support, community service</i></b>							
Within 24 hours	0%	0%	0%	*	*	0%	0%
Within 7 days	0%	0%	*	0%	*	0%	0%
Within 30 days	1%	0%	1%	0%	0%	0%	0%

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
No Referral	99%	99%	99%	100%	100%	100%	99%
<b><i>Military OneSource</i></b>							
Within 24 hours	0%	0%	*	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	0%	0%	1%	0%	0%	1%
No Referral	99%	99%	100%	99%	100%	99%	99%
<b><i>Other</i></b>							
Within 24 hours	1%	0%	0%	1%	0%	1%	1%
Within 7 days	1%	1%	2%	0%	0%	1%	1%
Within 30 days	3%	3%	2%	3%	0%	2%	3%
No Referral	95%	96%	96%	96%	100%	96%	96%
<b><i>No referral</i></b>							
Missing	25%	22%	19%	14%	1%	17%	22%
Not checked	13%	12%	19%	11%	4%	8%	11%
Checked	62%	66%	62%	75%	94%	75%	67%
<b>14. SM was provided with:</b>							
<b><i>Medical threat debrief</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	39%	40%	39%	60%	47%	57%	43%
Checked	61%	59%	61%	40%	53%	43%	57%
<b><i>Health education information</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	42%	47%	36%	54%	48%	44%	44%
Checked	58%	53%	64%	46%	52%	56%	56%
<b><i>Health care benefits information</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	70%	78%	62%	72%	92%	74%	73%
Checked	30%	22%	38%	28%	8%	26%	27%
<b><i>Appointment assistance</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	93%	96%	95%	97%	99%	95%	94%
Checked	7%	4%	5%	3%	0%	5%	6%
<b><i>Member declined to complete form</i></b>							
Not checked	100%	100%	99%	100%	100%	100%	100%
Checked	0%	0%	1%	0%	0%	0%	0%
<b><i>Member declined interview</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	100%	100%	98%	100%	100%	100%	100%
Checked	0%	0%	2%	0%	0%	0%	0%
<b><i>Member declined referral</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	98%	98%	99%	97%	100%	98%	98%
Checked	2%	2%	1%	3%	0%	2%	2%
<b><i>LOD</i></b>							
Missing	0%	0%	*	0%	0%	0%	0%

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Questions in clinician portion of DD 2796	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>156751</b>	<b>33915</b>	<b>1535</b>	<b>15511</b>	<b>12988</b>	<b>33975</b>	<b>255188</b>
Not checked	99%	99%	100%	99%	100%	98%	99%
Checked	1%	1%	0%	1%	0%	2%	1%
<b>Other</b>							
Not checked	97%	99%	99%	95%	100%	96%	97%
Checked	3%	1%	1%	5%	0%	4%	3%
<b>15. Referral made to following</b>							
<b>Military treatment facility</b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	78%	83%	79%	85%	91%	89%	81%
Checked	22%	17%	21%	15%	9%	11%	19%
<b>Division/Line-based medical resource</b>							
Missing	0%	*	*	0%	*	*	0%
Not checked	98%	99%	99%	99%	100%	99%	98%
Checked	2%	1%	1%	1%	0%	1%	2%
<b>VA</b>							
Missing	*	*	*	0%	*	*	0%
Not checked	97%	96%	97%	95%	100%	93%	96%
Checked	3%	4%	3%	5%	0%	7%	4%
<b>Vet center</b>							
Not checked	99%	98%	99%	99%	100%	99%	99%
Checked	1%	2%	1%	1%	0%	1%	1%
<b>TRICARE</b>							
Not checked	97%	96%	97%	96%	100%	95%	96%
Checked	3%	4%	3%	4%	0%	5%	4%
<b>Contract support</b>							
Not checked	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	*	0%	*	0%	0%
<b>Community service</b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	0%	0%	*	0%	0%
<b>Other</b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	99%	98%	98%	99%	98%	98%	99%
Checked	1%	2%	2%	1%	2%	2%	1%
<b>None</b>							
Missing	0%	0%	*	0%	0%	0%	0%
Not checked	30%	23%	28%	21%	11%	20%	26%
Checked	70%	77%	72%	79%	89%	80%	74%

\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.

\*\*There were 513 SMs who did not indicate a deployment location and are not included in this appendix.

\*\*\*Note: Asterisks indicate that there were no SMs endorsing the response.

**Table M.3 January 2008 DD Form 2900 Items – Descriptive Statistics by Deployment Location**

Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
<b>Gender</b>							
Missing	0%	*	*	*	*	*	0%
Male	91%	90%	94%	84%	84%	87%	90%
Female	9%	10%	6%	16%	16%	13%	10%
<b>Age</b>							
N	161358	30637	3267	16380	12327	23856	251089
Mean	29.84	31.45	32.52	32.11	31.3	32.13	30.53
Standard deviation	7.88	8.38	8.04	9.1	7.87	8.6	8.15
Median	27	29	30	30	29	30	28
Range	49	43	42	43	46	47	49
<b>Race</b>							
Missing	2%	2%	3%	3%	2%	2%	2%
Asian/Pacific Islander	4%	4%	4%	5%	4%	5%	4%
Black	14%	13%	15%	19%	14%	15%	14%
Hispanic	10%	9%	11%	10%	6%	10%	10%
American Indian/Alaskan Native	1%	1%	1%	2%	1%	2%	1%
Other	0%	0%	0%	1%	1%	1%	0%
White	68%	71%	65%	61%	72%	66%	68%
<b>Education Level</b>							
Bachelor's degree	11%	16%	14%	14%	17%	14%	13%
High school	72%	61%	66%	66%	56%	61%	68%
Master's degree	3%	5%	6%	4%	6%	4%	4%
No high school	1%	1%	1%	1%	0%	1%	1%
Doctorate	1%	1%	1%	1%	1%	1%	1%
Less than 4 years of college	11%	15%	11%	14%	19%	18%	13%
Unknown	1%	1%	2%	1%	1%	1%	1%
<b>Marital Status</b>							
Missing	7%	2%	2%	7%	1%	7%	7%
Never married	27%	29%	22%	25%	29%	23%	27%
Married	55%	58%	62%	56%	60%	59%	56%
Separated	3%	2%	4%	2%	1%	2%	2%
Divorced	8%	8%	10%	10%	9%	9%	8%
Widowed	0%	0%	0%	0%	0%	0%	0%
<b>Service</b>							
Air Force	14%	29%	15%	29%	91%	42%	25%
Army	61%	60%	70%	37%	5%	25%	52%
Marines	20%	4%	10%	14%	0%	8%	15%
Navy	5%	6%	5%	20%	4%	25%	8%
<b>Branch and Component</b>							
Army Active	39%	40%	50%	11%	3%	13%	33%
Army Reserve	9%	6%	8%	12%	2%	4%	8%

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Army National Guard	13%	14%	12%	13%	0%	8%	12%
Air Force Active	11%	21%	12%	23%	74%	29%	19%
Air Force Reserve	1%	2%	2%	2%	7%	3%	2%
Air National Guard	3%	6%	2%	4%	9%	10%	4%
Navy Active	4%	4%	4%	11%	3%	18%	6%
Navy Reserve	2%	2%	1%	9%	1%	8%	3%
Marine Active Duty	17%	4%	9%	14%	0%	7%	13%
Marine Forces Reserve	3%	0%	1%	0%	0%	1%	2%
<b>Status Prior to Deployment</b>							
Missing	14%	5%	6%	15%	2%	17%	13%
Active duty	60%	68%	73%	46%	81%	53%	60%
Selected Reserves - Reserve - Unit	11%	8%	8%	20%	7%	12%	11%
Selected Reserves - Reserve - AGR	1%	1%	1%	2%	0%	1%	1%
Selected Reserves - Reserve - IMA	0%	0%	0%	0%	0%	0%	0%
Selected Reserves - National Guard - Unit	13%	15%	11%	14%	7%	14%	13%
Selected Reserves - National Guard - AGR	1%	2%	1%	1%	1%	2%	1%
Ready Reserves - IRR	0%	0%	0%	0%	0%	0%	0%
Ready Reserves - ING	0%	0%	*	0%	0%	0%	0%
Civilian Government Employee	0%	1%	0%	1%	1%	1%	1%
Other	0%	0%	0%	0%	0%	0%	0%
<b>Pay Grade</b>							
Missing	*	*	*	*	0%	*	0%
E01 - EO4	40%	30%	18%	33%	28%	29%	36%
E05 - E06	37%	38%	49%	41%	40%	42%	38%
E07 - E09	9%	13%	14%	12%	12%	13%	11%
O01 - O04	10%	15%	11%	11%	17%	12%	11%
O05 - O10	2%	3%	4%	3%	3%	3%	3%
W01 - W05	2%	2%	3%	1%	0%	1%	1%
<b>Status since return</b>							
Missing	16%	6%	6%	21%	3%	19%	15%
Maintained/returned to previous status	79%	90%	88%	74%	95%	75%	79%
Transitioned to Selected Reserves	4%	3%	3%	4%	2%	4%	4%
Transitioned to IRR	1%	1%	1%	0%	0%	0%	1%
Transitioned to ING	0%	0%	1%	0%	0%	0%	0%
Retired from Military Service	0%	0%	0%	0%	0%	0%	0%
Separated from Military Service	0%	0%	1%	0%	0%	0%	0%
<b>OIF Total Deployments</b>							
Missing	12%	69%	5%	29%	45%	54%	27%

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
1	55%	23%	66%	50%	28%	29%	46%
2	25%	6%	21%	15%	14%	12%	20%
3	6%	2%	5%	4%	7%	4%	5%
4	1%	1%	2%	1%	3%	1%	1%
5 or more	1%	0%	2%	1%	3%	1%	1%
<b>OEF Total Deployments</b>							
Missing	87%	18%	11%	71%	50%	57%	72%
1	11%	62%	71%	21%	29%	29%	21%
2	2%	14%	14%	5%	12%	9%	5%
3	0%	3%	3%	2%	5%	3%	1%
4	0%	1%	1%	0%	2%	1%	0%
5 or more	0%	1%	1%	0%	2%	1%	1%
<b>Other Total Deployments</b>							
Missing	92%	90%	85%	83%	83%	72%	89%
1	6%	7%	10%	13%	11%	19%	8%
2	1%	2%	2%	3%	3%	5%	2%
3	0%	1%	1%	1%	1%	2%	1%
4	0%	0%	0%	0%	1%	1%	0%
5 or more	0%	0%	1%	0%	1%	1%	0%
<b>Any SM self-reported problems- created index*</b>							
No	22%	28%	19%	33%	51%	41%	27%
Yes	78%	72%	81%	67%	49%	59%	73%
<b>Overall PDHRA-total SM self-reported problems- created index*</b>							
N	161358	30637	3267	16380	12327	23856	251089
Mean	2.5	2.1	2.8	1.73	0.89	1.34	2.18
Standard deviation	2.24	2.09	2.35	1.91	1.26	1.67	2.17
Median	2	1	2	1	0	1	2
Range	9	9	9	9	9	9	9
<b>1-8a. General health history- created index*</b>							
N	161358	30637	3267	16380	12327	23856	251089
Mean	1.7	1.43	1.93	1.31	0.63	1	1.5
Standard deviation	1.96	1.84	2.06	1.8	1.24	1.59	1.89
Median	1	1	1	0	0	0	1
Range	7	7	7	7	7	7	7
<b>1. Health assessment (past month)</b>							
Missing	1%	1%	1%	2%	0%	2%	2%
Excellent	20%	23%	19%	24%	32%	29%	22%
Very good	32%	35%	32%	35%	39%	36%	33%
Good	33%	31%	34%	30%	25%	26%	31%
Fair	11%	9%	12%	8%	4%	6%	10%
Poor	2%	2%	2%	2%	0%	1%	2%
<b>2. Health change (compared to pre-deployment health)</b>							
Missing	2%	1%	1%	4%	1%	4%	4%
Much better now than before I deployed	5%	6%	6%	6%	8%	6%	5%

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Somewhat better now than before I deployed	10%	11%	10%	11%	14%	12%	10%
About the same as before I deployed	57%	60%	54%	61%	69%	65%	58%
Somewhat worse now than before I deployed	22%	19%	25%	16%	7%	12%	19%
Much worse now than before I deployed	4%	3%	5%	3%	1%	2%	3%
<b>3. Daily activities difficult: physical problems (past 4 weeks)</b>							
Missing	2%	1%	1%	2%	1%	2%	3%
Not difficult at all	69%	73%	64%	75%	87%	80%	71%
Somewhat difficult	25%	22%	29%	20%	11%	16%	23%
Very difficult	4%	3%	5%	3%	1%	2%	3%
Extremely difficult	1%	1%	1%	1%	0%	1%	1%
<b>4. Daily activities difficult: emotional problems (past 4 weeks)</b>							
Missing	2%	1%	1%	2%	1%	2%	3%
Not difficult at all	70%	75%	68%	78%	90%	83%	72%
Somewhat difficult	22%	20%	24%	16%	9%	12%	20%
Very difficult	5%	3%	5%	3%	1%	2%	4%
Extremely difficult	2%	1%	2%	1%	0%	1%	1%
<b>5. Times seen by healthcare provider since return</b>							
0	40%	42%	38%	41%	47%	42%	42%
1	18%	20%	18%	18%	22%	19%	19%
2 to 3	21%	21%	22%	21%	20%	21%	21%
4 to 5	8%	8%	8%	8%	5%	8%	8%
6 or more	12%	9%	14%	12%	5%	10%	11%
<b>6. Hospitalized since return</b>							
Missing	1%	1%	1%	2%	0%	2%	3%
No	92%	94%	91%	92%	96%	92%	92%
Yes	6%	5%	8%	6%	3%	6%	6%
<b>7. Injured during deployment</b>							
Missing	2%	1%	1%	2%	1%	2%	3%
No	78%	81%	75%	81%	91%	84%	79%
Yes	20%	18%	23%	16%	9%	13%	18%
<b>7a. Problems related to injury</b>							
Missing	76%	79%	73%	81%	91%	85%	79%
No	9%	8%	9%	7%	4%	6%	8%
Yes	13%	11%	16%	10%	4%	7%	11%
Unsure	2%	2%	3%	1%	1%	1%	2%
<b>8. Health condition related to deployment</b>							
Missing	7%	7%	9%	5%	2%	5%	8%
No	55%	61%	48%	67%	86%	76%	59%
Yes	29%	24%	32%	22%	9%	14%	25%
Unsure	8%	7%	10%	6%	4%	5%	7%
<b>8a. Physical health concerns- created index*</b>							
N	161358	30637	3267	16380	12327	23856	251089

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Mean	1.42	1.04	1.83	0.84	0.25	0.52	1.18
Standard Deviation	2.81	2.35	3.23	2.2	1.08	1.67	2.58
Median	0	0	0	0	0	0	0
Range	20	20	20	20	18	20	20
<b>8a. Health concerns reported</b>							
<b><i>Fever</i></b>							
Not checked	100%	100%	99%	100%	100%	100%	100%
Checked	0%	0%	1%	0%	0%	0%	0%
<b><i>Cough lasting three weeks</i></b>							
Not checked	97%	98%	97%	98%	99%	99%	98%
Checked	3%	2%	3%	2%	1%	1%	2%
<b><i>Trouble breathing</i></b>							
Not checked	97%	98%	96%	97%	99%	99%	97%
Checked	3%	2%	4%	3%	1%	1%	3%
<b><i>Headache</i></b>							
Not checked	92%	94%	90%	95%	98%	97%	93%
Checked	8%	6%	10%	5%	2%	3%	7%
<b><i>Feeling weak</i></b>							
Not checked	96%	97%	95%	98%	99%	99%	97%
Checked	4%	3%	5%	2%	1%	1%	3%
<b><i>Muscle ache</i></b>							
Not checked	93%	94%	90%	95%	98%	97%	94%
Checked	7%	6%	10%	5%	2%	3%	6%
<b><i>Joints</i></b>							
Not checked	89%	91%	86%	92%	97%	95%	91%
Checked	11%	9%	14%	8%	3%	5%	9%
<b><i>Back pain</i></b>							
Not checked	84%	88%	81%	90%	97%	93%	86%
Checked	16%	12%	19%	10%	3%	7%	14%
<b><i>Numbness in hands or feet</i></b>							
Not checked	94%	96%	91%	96%	99%	97%	95%
Checked	6%	4%	9%	4%	1%	3%	5%
<b><i>Trouble hearing</i></b>							
Not checked	92%	94%	89%	96%	99%	97%	93%
Checked	8%	6%	11%	4%	1%	3%	7%
<b><i>Ring in ears</i></b>							
Not checked	91%	94%	88%	96%	99%	97%	93%
Checked	9%	6%	12%	4%	1%	3%	7%
<b><i>Watery, red eyes</i></b>							
Not checked	98%	99%	96%	98%	99%	99%	98%
Checked	2%	1%	4%	2%	1%	1%	2%
<b><i>Dimming of vision</i></b>							
Not checked	99%	99%	98%	99%	100%	100%	99%
Checked	1%	1%	2%	1%	0%	0%	1%
<b><i>Chest pain or pressure</i></b>							

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Not checked	97%	98%	97%	98%	99%	99%	98%
Checked	3%	2%	3%	2%	1%	1%	2%
<b><i>Dizzy</i></b>							
Not checked	97%	98%	96%	98%	100%	99%	98%
Checked	3%	2%	4%	2%	0%	1%	2%
<b><i>Diarrhea or vomiting</i></b>							
Not checked	97%	97%	95%	98%	99%	99%	97%
Checked	3%	3%	5%	2%	1%	1%	3%
<b><i>Sleeping problems/tired</i></b>							
Not checked	83%	87%	79%	90%	97%	94%	86%
Checked	17%	13%	21%	10%	3%	6%	14%
<b><i>Trouble concentrating</i></b>							
Not checked	91%	94%	88%	95%	99%	97%	93%
Checked	9%	6%	12%	5%	1%	3%	7%
<b><i>Trouble with memory</i></b>							
Not checked	90%	93%	86%	94%	99%	97%	91%
Checked	10%	7%	14%	6%	1%	3%	9%
<b><i>Indecisive</i></b>							
Not checked	95%	97%	94%	97%	99%	98%	96%
Checked	5%	3%	6%	3%	1%	2%	4%
<b><i>Increased irritability</i></b>							
Not checked	87%	90%	84%	94%	98%	96%	89%
Checked	13%	10%	16%	6%	2%	4%	11%
<b><i>Taking more risks</i></b>							
Not checked	97%	98%	97%	99%	100%	99%	98%
Checked	3%	2%	3%	1%	0%	1%	2%
<b><i>Skin disease or rash</i></b>							
Not checked	96%	97%	94%	96%	99%	98%	97%
Checked	4%	3%	6%	4%	1%	2%	3%
<b><i>Other</i></b>							
Not checked	90%	92%	91%	90%	97%	95%	91%
Checked	10%	8%	9%	10%	3%	5%	9%
<b>9d. Have any TBI symptoms- created index*</b>							
Missing	24%	26%	27%	14%	12%	14%	23%
No	61%	63%	52%	80%	87%	82%	65%
Yes	15%	11%	21%	6%	1%	4%	12%
<b>9d. TBI symptoms- created index*</b>							
N	122337	22741	2388	14100	10792	20550	192908
Mean	0.54	0.39	0.82	0.17	0.03	0.13	0.43
Standard Deviation	1.33	1.1	1.58	0.77	0.28	0.67	1.19
Median	0	0	0	0	0	0	0
Range	7	7	7	7	7	7	7
<b>9a. Experienced following event:</b>							
<b><i>Blast or explosion</i></b>							
Missing	3%	2%	2%	3%	1%	3%	4%

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No	64%	69%	58%	93%	97%	91%	70%
Yes	33%	29%	41%	4%	3%	6%	26%
<b>Crash</b>							
Missing	4%	3%	4%	3%	1%	3%	5%
No	88%	88%	85%	94%	96%	94%	88%
Yes	8%	9%	12%	3%	4%	3%	7%
<b>Fragment/bullet wound (above shoulders)</b>							
Missing	4%	4%	4%	3%	1%	4%	5%
No	95%	96%	94%	97%	99%	96%	94%
Yes	1%	1%	2%	0%	0%	0%	1%
<b>Fall</b>							
Missing	4%	3%	3%	3%	1%	3%	5%
No	84%	83%	78%	91%	97%	91%	85%
Yes	12%	14%	19%	6%	2%	6%	11%
<b>Other injury</b>							
Missing	6%	5%	7%	4%	1%	4%	7%
No	86%	87%	84%	87%	92%	88%	85%
Yes	8%	8%	9%	9%	7%	8%	8%
<b>9b. Problems immediately after event (from 9a)</b>							
<b>Knocked out</b>							
Missing	48%	49%	37%	76%	85%	78%	55%
No	49%	49%	59%	24%	15%	21%	42%
Yes	3%	2%	4%	1%	0%	1%	2%
<b>Dazed</b>							
Missing	48%	49%	37%	75%	85%	78%	55%
No	42%	43%	50%	21%	15%	19%	37%
Yes	10%	8%	14%	3%	1%	3%	8%
<b>Memory loss of event</b>							
Missing	49%	49%	38%	76%	85%	79%	55%
No	49%	49%	59%	24%	15%	21%	43%
Yes	2%	2%	3%	1%	0%	1%	2%
<b>Concussion</b>							
Missing	48%	49%	37%	76%	85%	78%	55%
No	49%	49%	58%	24%	15%	21%	42%
Yes	3%	2%	5%	1%	0%	1%	2%
<b>Head injury</b>							
Missing	48%	49%	37%	76%	85%	79%	55%
No	48%	49%	58%	23%	15%	20%	42%
Yes	3%	3%	4%	1%	0%	1%	3%
<b>9c. Problems got worse after event (from 9a)</b>							
<b>Memory lapses</b>							
Missing	66%	70%	59%	84%	95%	87%	72%
No	29%	26%	33%	15%	4%	11%	24%
Yes	5%	3%	8%	2%	0%	1%	4%
<b>Dizziness</b>							

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Missing	66%	71%	59%	84%	95%	87%	72%
No	30%	27%	36%	15%	4%	12%	26%
Yes	3%	2%	5%	1%	0%	1%	3%
<b><i>Ringin g in ears</i></b>							
Missing	66%	70%	59%	84%	95%	87%	72%
No	26%	24%	30%	14%	4%	11%	22%
Yes	8%	6%	12%	2%	0%	2%	6%
<b><i>Sensitive to light</i></b>							
Missing	66%	71%	59%	84%	95%	87%	72%
No	30%	27%	36%	15%	4%	12%	25%
Yes	4%	2%	5%	1%	0%	1%	3%
<b><i>Irritability</i></b>							
Missing	66%	70%	59%	84%	95%	87%	72%
No	25%	24%	29%	13%	4%	11%	22%
Yes	9%	6%	12%	3%	0%	2%	7%
<b><i>Headaches</i></b>							
Missing	66%	70%	59%	84%	95%	87%	72%
No	26%	24%	31%	13%	4%	11%	22%
Yes	8%	5%	10%	3%	1%	2%	6%
<b><i>Sleep problems</i></b>							
Missing	66%	70%	59%	84%	95%	87%	72%
No	23%	22%	26%	12%	4%	10%	20%
Yes	11%	8%	16%	4%	1%	3%	9%
<b>9d. Symptoms in past week (from 9c)</b>							
<b><i>Memory lapses</i></b>							
Missing	78%	80%	71%	90%	97%	93%	82%
No	18%	17%	22%	9%	3%	6%	15%
Yes	4%	2%	7%	1%	0%	1%	3%
<b><i>Dizziness</i></b>							
Missing	74%	76%	67%	89%	97%	91%	78%
No	24%	22%	29%	10%	3%	8%	20%
Yes	2%	2%	3%	1%	0%	1%	2%
<b><i>Ringin g in ears</i></b>							
Missing	73%	76%	66%	88%	97%	91%	77%
No	21%	20%	25%	10%	3%	8%	18%
Yes	6%	4%	9%	2%	0%	2%	5%
<b><i>Sensitive to light</i></b>							
Missing	74%	76%	67%	89%	97%	91%	78%
No	23%	22%	29%	10%	3%	8%	19%
Yes	3%	2%	4%	1%	0%	1%	2%
<b><i>Irritability</i></b>							
Missing	73%	76%	65%	88%	97%	91%	77%
No	19%	19%	23%	9%	3%	7%	16%
Yes	8%	6%	11%	3%	0%	2%	6%
<b><i>Headaches</i></b>							

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Missing	73%	76%	66%	88%	97%	91%	78%
No	20%	20%	25%	9%	3%	7%	17%
Yes	7%	4%	9%	3%	0%	2%	5%
<b><i>Sleep problems</i></b>							
Missing	72%	75%	65%	88%	97%	90%	77%
No	18%	17%	21%	8%	3%	7%	15%
Yes	10%	8%	14%	4%	1%	3%	8%
<b>10. Exposure concerns</b>							
Missing	9%	10%	12%	6%	2%	7%	10%
No	64%	70%	59%	77%	90%	81%	68%
Yes	27%	20%	29%	17%	8%	12%	23%
<b>10a. Have any exposure concerns- created index*</b>							
No	74%	80%	71%	84%	92%	89%	78%
Yes	26%	20%	29%	16%	8%	11%	22%
<b>10a. Exposure concerns- created index*</b>							
N	161358	30637	3267	16380	12327	23856	251089
Mean	1.37	0.95	1.66	0.62	0.27	0.46	1.11
Standard Deviation	3.02	2.49	3.35	1.91	1.22	1.68	2.73
Median	0	0	0	0	0	0	0
Range	19	19	19	19	16	19	19
<b>10a. Reported exposure concerns</b>							
<b><i>Animal bites</i></b>							
Not checked	100%	100%	99%	100%	100%	100%	100%
Checked	0%	0%	1%	0%	0%	0%	0%
<b><i>Animal bodies (dead)</i></b>							
Not checked	98%	99%	97%	99%	100%	99%	98%
Checked	2%	1%	3%	1%	0%	1%	2%
<b><i>Chlorine gas</i></b>							
Not checked	99%	100%	99%	99%	100%	100%	99%
Checked	1%	0%	1%	1%	0%	0%	1%
<b><i>Depleted uranium</i></b>							
Not checked	99%	99%	99%	99%	100%	100%	99%
Checked	1%	1%	1%	1%	0%	0%	1%
<b><i>Excessive vibration</i></b>							
Not checked	93%	96%	91%	97%	99%	98%	95%
Checked	7%	4%	9%	3%	1%	2%	5%
<b><i>Fog oils</i></b>							
Not checked	97%	99%	97%	99%	100%	99%	98%
Checked	3%	1%	3%	1%	0%	1%	2%
<b><i>Garbage</i></b>							
Not checked	89%	93%	87%	97%	99%	96%	92%
Checked	11%	7%	13%	3%	1%	4%	8%
<b><i>Human blood/bodily fluids/bodies</i></b>							
Not checked	95%	96%	93%	99%	100%	99%	96%
Checked	5%	4%	7%	1%	0%	1%	4%

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
<b><i>Industrial pollution</i></b>							
Not checked	92%	95%	91%	94%	99%	97%	93%
Checked	8%	5%	9%	6%	1%	3%	7%
<b><i>Insect bites</i></b>							
Not checked	94%	96%	92%	98%	99%	98%	95%
Checked	6%	4%	8%	2%	1%	2%	5%
<b><i>Ionizing radiation</i></b>							
Not checked	99%	100%	99%	100%	100%	100%	99%
Checked	1%	0%	1%	0%	0%	0%	1%
<b><i>JP8/other fuels</i></b>							
Not checked	90%	93%	88%	95%	97%	97%	92%
Checked	10%	7%	12%	5%	3%	3%	8%
<b><i>Lasers</i></b>							
Not checked	98%	99%	97%	100%	100%	100%	98%
Checked	2%	1%	3%	0%	0%	0%	2%
<b><i>Loud noises</i></b>							
Not checked	84%	89%	81%	93%	95%	94%	87%
Checked	16%	11%	19%	7%	5%	6%	13%
<b><i>Paints</i></b>							
Not checked	98%	98%	97%	99%	99%	99%	98%
Checked	2%	2%	3%	1%	1%	1%	2%
<b><i>Pesticides</i></b>							
Not checked	97%	98%	96%	99%	100%	99%	98%
Checked	3%	2%	4%	1%	0%	1%	2%
<b><i>Radar/microwaves</i></b>							
Not checked	96%	98%	96%	98%	99%	99%	97%
Checked	4%	2%	4%	2%	1%	1%	3%
<b><i>Sand/dust</i></b>							
Not checked	81%	86%	79%	88%	94%	94%	84%
Checked	19%	14%	21%	12%	6%	6%	16%
<b><i>Smoke: burning trash or feces</i></b>							
Not checked	81%	86%	80%	96%	99%	93%	85%
Checked	19%	14%	20%	4%	1%	7%	15%
<b><i>Smoke: oil fires</i></b>							
Not checked	94%	97%	92%	97%	99%	98%	95%
Checked	6%	3%	8%	3%	1%	2%	5%
<b><i>Solvents</i></b>							
Not checked	97%	98%	96%	98%	99%	99%	97%
Checked	3%	2%	4%	2%	1%	1%	3%
<b><i>Smoke: tent heater</i></b>							
Not checked	99%	98%	98%	99%	100%	100%	99%
Checked	1%	2%	2%	1%	0%	0%	1%
<b><i>Exhaust fumes</i></b>							
Not checked	89%	92%	86%	94%	97%	96%	91%
Checked	11%	8%	14%	6%	3%	4%	9%

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	161358	30637	3267	16380	12327	23856	251089
<b>Other</b>							
Not checked	97%	97%	97%	96%	99%	98%	97%
Checked	3%	3%	3%	4%	1%	2%	3%
<b>11. Concern about relationship conflicts</b>							
Missing	3%	2%	2%	3%	1%	3%	4%
No	78%	82%	75%	84%	93%	87%	79%
Yes	13%	10%	15%	9%	4%	6%	11%
Unsure	6%	5%	8%	4%	2%	3%	5%
<b>12. Any PTSD symptoms- created index*</b>							
Missing	2%	1%	1%	3%	1%	2%	3%
No	73%	78%	69%	84%	96%	89%	76%
Yes	25%	21%	30%	13%	3%	9%	21%
<b>12. PTSD symptoms- created index*</b>							
N	158459	30288	3233	15968	12227	23265	243440
Mean	0.54	0.43	0.68	0.27	0.06	0.18	0.45
Standard Deviation	1.09	0.99	1.21	0.78	0.36	0.65	1.01
Median	0	0	0	0	0	0	0
Range	4	4	4	4	4	4	4
<b>12a. Nightmares about upsetting experience (past month)</b>							
Missing	2%	1%	1%	3%	1%	3%	3%
No	86%	88%	84%	93%	98%	94%	87%
Yes	12%	10%	15%	5%	1%	4%	10%
<b>12b. Tried not to think about upsetting experience (past month)</b>							
Missing	2%	1%	1%	3%	1%	3%	3%
No	87%	90%	85%	92%	98%	94%	88%
Yes	11%	9%	14%	6%	1%	4%	9%
<b>12c. Constantly on guard or easily startled (past month)</b>							
Missing	2%	1%	1%	3%	1%	3%	3%
No	81%	85%	78%	89%	98%	92%	83%
Yes	17%	13%	21%	8%	1%	5%	14%
<b>12d. Numb or detached from others (past month)</b>							
Missing	2%	2%	2%	3%	1%	3%	3%
No	84%	87%	81%	90%	97%	92%	85%
Yes	14%	11%	18%	8%	2%	5%	11%
<b>13. Alcohol problems- created index*</b>							
Missing	5%	3%	3%	7%	1%	6%	6%
No	52%	58%	54%	61%	73%	64%	55%
Yes	43%	39%	43%	32%	25%	30%	39%
<b>13a. Used alcohol more than meant to (past month)</b>							
Missing	2%	1%	1%	3%	1%	2%	3%
No	91%	93%	91%	94%	98%	95%	91%
Yes	7%	6%	8%	4%	1%	3%	6%
<b>13b. Wanted or needed to cut down on alcohol (past month)</b>							
Missing	2%	1%	1%	3%	1%	3%	3%
No	91%	93%	91%	93%	98%	94%	91%

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Yes	7%	6%	7%	4%	1%	3%	6%
<b>13c. How often drink alcohol</b>							
Missing	6%	3%	3%	7%	2%	6%	7%
Never	14%	14%	14%	15%	16%	13%	14%
Monthly or less	25%	27%	26%	30%	37%	33%	27%
2 to 4 times a month	31%	32%	32%	30%	33%	31%	31%
2 to 3 times a week	18%	18%	19%	14%	11%	13%	17%
4 or more times a week	6%	6%	7%	4%	2%	3%	5%
<b>13d. How many drinks per day when drinking</b>							
Missing	24%	19%	19%	30%	15%	28%	25%
1 or 2	35%	44%	42%	38%	57%	42%	38%
3 or 4	25%	24%	24%	22%	23%	22%	24%
5 or 6	10%	8%	10%	7%	4%	6%	9%
7 to 9	4%	3%	3%	2%	1%	2%	3%
10 or more	2%	2%	2%	1%	0%	1%	2%
<b>13e. How often drink six or more drinks on one occasion</b>							
Missing	18%	13%	13%	21%	5%	19%	18%
Never	29%	37%	33%	37%	56%	39%	32%
Less than monthly	31%	31%	32%	29%	32%	31%	31%
Monthly	13%	11%	13%	9%	5%	8%	11%
Weekly	9%	7%	8%	4%	1%	4%	7%
Daily	1%	1%	1%	0%	0%	0%	1%
<b>14. Any depressive symptoms- created index*</b>							
Missing	12%	5%	5%	18%	3%	19%	13%
No	77%	87%	84%	75%	95%	77%	78%
Yes	11%	8%	11%	7%	3%	5%	9%
<b>Q14. Depressive symptoms- created index*</b>							
N	141554	29083	3113	13372	11975	19420	218517
Mean	0.17	0.12	0.17	0.12	0.04	0.09	0.15
Standard Deviation	0.5	0.42	0.5	0.42	0.24	0.36	0.47
Median	0	0	0	0	0	0	0
Range	2	2	2	2	2	2	2
<b>14a. Little interest in things (past month)</b>							
Missing	13%	5%	5%	19%	3%	19%	14%
Not at all	57%	69%	63%	60%	86%	64%	60%
Few or several days	21%	19%	22%	15%	9%	12%	19%
More than half the days	6%	4%	6%	4%	1%	3%	5%
Nearly every day	3%	2%	4%	2%	1%	1%	3%
<b>14b. Feeling down or hopeless (past month)</b>							
Missing	14%	6%	5%	20%	3%	20%	14%
Not at all	62%	73%	69%	62%	87%	66%	64%
Few or several days	18%	16%	19%	14%	8%	11%	16%
More than half the days	4%	3%	4%	3%	1%	2%	3%
Nearly every day	2%	2%	2%	2%	0%	1%	2%
<b>15-18. Any requests for support- created index*</b>							

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Questions in SM portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Missing	1%	1%	1%	2%	1%	2%	3%
No	80%	85%	80%	83%	94%	89%	81%
Yes	18%	15%	20%	15%	5%	9%	16%
<b>Q15-18. Requests for support- created index*</b>							
N	159266	30398	3245	16046	12240	23375	244570
Mean	0.3	0.23	0.32	0.24	0.07	0.14	0.26
Standard Deviation	0.74	0.64	0.76	0.66	0.33	0.51	0.69
Median	0	0	0	0	0	0	0
Range	4	4	4	4	4	4	4
<b>15. Request healthcare visit</b>							
Missing	1%	1%	1%	2%	1%	2%	3%
No	84%	88%	83%	86%	96%	91%	85%
Yes	15%	12%	16%	12%	4%	7%	13%
<b>16. Request information on or assistance for stress, emotional or alcohol concern</b>							
Missing	1%	1%	1%	2%	1%	2%	3%
No	91%	94%	92%	92%	98%	95%	91%
Yes	8%	6%	7%	6%	1%	3%	6%
<b>17. Request help for family or relationship concern</b>							
Missing	1%	1%	1%	2%	1%	2%	3%
No	93%	95%	93%	93%	98%	95%	93%
Yes	5%	4%	6%	4%	1%	3%	5%
<b>18. Request to see Chaplain or community support counselor</b>							
Missing	1%	1%	1%	2%	1%	2%	3%
No	96%	97%	97%	96%	99%	97%	95%
Yes	2%	2%	2%	2%	1%	1%	2%

\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHRA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.

\*\*There were 3,264 SMs who did not indicate a deployment location and are not included in this appendix.

\*\*\*Note: Asterisks indicate that there were no SMs endorsing the response.

**Table M.4 January 2008 DD Form 2900 Items – Descriptive Statistics by Deployment Location**

Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
<b>1. Review symptoms or concerns</b>							
Missing	18%	15%	10%	31%	47%	35%	23%
Confirmed	66%	68%	74%	50%	34%	48%	61%
Modified	16%	16%	16%	19%	19%	17%	17%
<b>2a. Thoughts of harming self (past month)</b>							
Missing	5%	11%	6%	14%	45%	18%	11%
No	94%	88%	93%	86%	55%	81%	88%
Yes	1%	1%	1%	1%	0%	0%	1%
<b>2a. How often bothered by thoughts of harming self</b>							
Missing	99%	99%	99%	99%	100%	100%	99%
A few days	1%	0%	1%	0%	0%	0%	0%
More than half of the time	0%	0%	0%	0%	0%	0%	0%
Nearly every day	0%	0%	0%	0%	0%	0%	0%
<b>2b. Thoughts of hurting/losing control with someone</b>							
Missing	6%	12%	7%	14%	45%	19%	11%
No	91%	86%	90%	84%	55%	80%	86%
Yes	2%	2%	2%	2%	0%	1%	2%
Unsure	1%	0%	1%	0%	0%	0%	0%
<b>3a. Provider determined risk to self or others</b>							
Missing	91%	93%	90%	95%	99%	96%	93%
No	8%	7%	9%	4%	1%	3%	7%
Yes	0%	0%	0%	0%	0%	0%	0%
Unsure	1%	0%	0%	0%	0%	0%	0%
<b>3b. Outcome of risk assessment</b>							
Missing	89%	87%	87%	90%	79%	88%	88%
Immediate referral	0%	0%	0%	0%	0%	0%	0%
Routine follow-up referral	2%	2%	3%	2%	1%	1%	2%
Referral not indicated	9%	11%	9%	9%	20%	11%	10%
<b>4a. Alcohol screening result</b>							
Missing	15%	15%	10%	29%	47%	34%	20%
No evidence	55%	58%	61%	47%	39%	45%	52%
Evidence	30%	27%	29%	24%	14%	22%	28%
<b>4b. Alcohol PCM referral indicated</b>							
Missing	15%	15%	10%	29%	47%	34%	20%
No	75%	75%	79%	66%	52%	62%	71%
Yes	10%	9%	12%	5%	1%	4%	9%
<b>5a. TBI risk assessment</b>							
Missing	19%	17%	13%	34%	47%	39%	24%
No evidence	67%	74%	71%	60%	52%	56%	65%
Evidence	13%	9%	16%	6%	1%	5%	11%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
Sample Size	161358	30637	3267	16380	12327	23856	251089
<b>5b. TBI referral indicated</b>							
Missing	19%	17%	13%	34%	47%	39%	24%
No	76%	80%	80%	64%	53%	60%	72%
Yes	4%	3%	7%	1%	0%	1%	4%
<b>7. Any clinician major concern- created index*</b>							
No	83%	87%	81%	86%	96%	91%	85%
Yes	17%	13%	19%	14%	4%	9%	15%
<b>Number of major concerns- created index*</b>							
N	161358	30637	3267	16380	12327	23856	251089
Mean	0.29	0.2	0.33	0.22	0.05	0.12	0.25
Standard deviation	0.8	0.65	0.84	0.68	0.28	0.49	0.73
Median	0	0	0	0	0	0	0
Range	9	8	7	8	6	8	9
<b>7. Physical symptoms</b>							
<i>Clinician concern</i>							
No Concern	70%	75%	66%	76%	90%	85%	74%
Minor Concern	18%	16%	20%	13%	7%	9%	16%
Major Concern	13%	9%	14%	10%	3%	6%	11%
<i>SM already under care</i>							
Missing	67%	74%	66%	73%	90%	82%	71%
Not checked	15%	12%	14%	11%	3%	7%	13%
Checked	17%	14%	20%	16%	6%	11%	16%
<b>7. Exposure symptoms</b>							
<i>Clinician concern</i>							
No Concern	88%	91%	87%	94%	97%	96%	90%
Minor Concern	10%	8%	11%	5%	2%	3%	8%
Major Concern	1%	1%	2%	1%	0%	1%	1%
<i>SM already under care</i>							
Missing	88%	91%	87%	93%	98%	95%	90%
Not checked	10%	7%	10%	6%	2%	4%	8%
Checked	2%	2%	3%	2%	1%	1%	2%
<b>7. Depression symptoms</b>							
<i>Clinician concern</i>							
No Concern	88%	91%	88%	93%	98%	95%	90%
Minor Concern	8%	7%	8%	5%	2%	3%	7%
Major Concern	4%	2%	3%	3%	1%	1%	3%
<i>SM already under care</i>							
Missing	88%	91%	88%	92%	98%	94%	90%
Not checked	8%	6%	8%	5%	1%	4%	7%
Checked	4%	3%	5%	3%	1%	2%	3%
<b>7. PTSD symptoms</b>							
<i>Clinician concern</i>							
No Concern	87%	90%	85%	94%	99%	96%	89%
Minor Concern	8%	7%	9%	4%	1%	2%	7%
Major Concern	5%	3%	6%	3%	0%	1%	4%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
<i><b>SM already under care</b></i>							
Missing	87%	89%	85%	93%	99%	96%	89%
Not checked	9%	7%	8%	5%	1%	3%	7%
Checked	5%	4%	6%	3%	0%	1%	4%
<b>7. Anger/Aggression symptoms</b>							
<i><b>Clinician concern</b></i>							
No Concern	96%	98%	96%	98%	100%	99%	97%
Minor Concern	2%	2%	2%	1%	0%	1%	2%
Major Concern	1%	1%	1%	1%	0%	0%	1%
<i><b>SM already under care</b></i>							
Missing	96%	98%	96%	98%	99%	99%	97%
Not checked	3%	2%	3%	2%	0%	1%	2%
Checked	1%	1%	1%	1%	0%	0%	1%
<b>7. Suicidal ideation</b>							
<i><b>Clinician concern</b></i>							
No Concern	99%	100%	99%	100%	100%	100%	100%
Minor Concern	0%	0%	0%	0%	0%	0%	0%
Major Concern	0%	0%	0%	0%	0%	0%	0%
<i><b>SM already under care</b></i>							
Missing	99%	99%	99%	100%	100%	100%	99%
Not checked	0%	0%	0%	0%	0%	0%	0%
Checked	0%	0%	0%	0%	0%	0%	0%
<b>7. Social/family conflict</b>							
<i><b>Clinician concern</b></i>							
No Concern	91%	93%	91%	94%	98%	97%	93%
Minor Concern	6%	5%	6%	3%	1%	2%	5%
Major Concern	3%	2%	3%	2%	1%	1%	2%
<i><b>SM already under care</b></i>							
Missing	91%	93%	91%	93%	98%	96%	92%
Not checked	6%	5%	6%	4%	1%	3%	5%
Checked	3%	2%	3%	2%	1%	1%	2%
<b>7. Alcohol use</b>							
<i><b>Clinician concern</b></i>							
No Concern	91%	93%	92%	95%	98%	96%	92%
Minor Concern	8%	6%	6%	4%	2%	3%	7%
Major Concern	2%	1%	2%	1%	0%	1%	1%
<i><b>SM already under care</b></i>							
Missing	89%	92%	92%	94%	98%	95%	91%
Not checked	9%	6%	7%	6%	2%	4%	8%
Checked	1%	1%	1%	1%	0%	1%	1%
<b>7. Other</b>							
<i><b>Clinician concern</b></i>							
No Concern	98%	98%	97%	99%	99%	99%	98%
Minor Concern	1%	1%	1%	1%	0%	1%	1%
Major Concern	1%	1%	1%	1%	0%	0%	1%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
<b><i>SM already under care</i></b>							
Missing	97%	98%	97%	99%	99%	99%	98%
Not checked	2%	1%	2%	1%	0%	1%	2%
Checked	1%	1%	1%	1%	0%	0%	1%
<b>8. Number of referrals- created index*</b>							
N	161358	30637	3267	16380	12327	23856	251089
Mean	0.41	0.32	0.41	0.3	0.12	0.2	0.35
Standard deviation	0.77	0.67	0.74	0.67	0.39	0.54	0.72
Median	0	0	0	0	0	0	0
Range	11	8	6	9	4	7	11
<b>8. Any referral- created index*</b>							
No Referral	71%	76%	70%	78%	90%	84%	75%
Any Referral	29%	24%	30%	22%	10%	16%	25%
<b>8. Received medical referral (a-d)- created index*</b>							
No	81%	84%	80%	86%	95%	90%	83%
Yes	19%	16%	20%	14%	5%	10%	17%
<b>8. Primary care (a)- created index*</b>							
No	85%	88%	85%	89%	96%	93%	87%
Yes	15%	12%	15%	11%	4%	7%	13%
<b>8. Behavioral care (b,c)- created index*</b>							
No	93%	94%	93%	95%	99%	97%	94%
Yes	7%	6%	7%	5%	1%	3%	6%
<b>8. Specialty physical care (d)- created index*</b>							
No	97%	98%	97%	98%	99%	98%	98%
Yes	3%	2%	3%	2%	1%	2%	2%
<b>8. Military OneSource (j)- created index*</b>							
No	96%	97%	96%	96%	99%	98%	96%
Yes	4%	3%	4%	4%	1%	2%	4%
<b>8. Other non-medical referral (e-k, except j)- created index*</b>							
No	95%	97%	94%	97%	99%	98%	96%
Yes	5%	3%	6%	3%	1%	2%	4%
<b>8. Referral indicated</b>							
<b><i>Primary care</i></b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	3%	2%	3%	2%	1%	1%	3%
Within 30 days	11%	10%	11%	9%	2%	6%	10%
No Referral	85%	88%	85%	89%	96%	93%	87%
<b><i>Behavioral health primary care</i></b>							
Within 24 hours	1%	0%	0%	0%	0%	0%	0%
Within 7 days	1%	1%	1%	1%	0%	1%	1%
Within 30 days	4%	3%	3%	3%	1%	1%	3%
No Referral	95%	96%	95%	96%	99%	98%	96%
<b><i>Mental health specialty care</i></b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	1%	1%	1%	0%	0%	0%	1%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Within 30 days	1%	1%	1%	1%	0%	1%	1%
No Referral	98%	98%	97%	99%	99%	99%	98%
<b>Audiology</b>							
Within 24 hours	0%	0%	*	*	0%	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	0%	1%	0%	0%	0%	1%
No Referral	99%	99%	99%	100%	100%	100%	99%
<b>Cardiology</b>							
Within 24 hours	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	*	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Dental</b>							
Within 24 hours	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	*	0%	*	0%	0%
Within 30 days	0%	0%	*	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Dermatology</b>							
Within 24 hours	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	*	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>ENT</b>							
Within 24 hours	*	*	0%	*	*	*	0%
Within 7 days	0%	0%	0%	*	*	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>GI</b>							
Within 24 hours	0%	*	0%	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%
Within 30 days	0%	0%	*	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Internal medicine</b>							
Within 24 hours	0%	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	*	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Neurology</b>							
Within 24 hours	0%	0%	0%	*	0%	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	99%	100%	100%	100%	100%
<b>OB/GYN</b>							
Within 24 hours	0%	*	*	0%	*	0%	0%
Within 7 days	0%	0%	*	0%	*	0%	0%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Within 30 days	0%	0%	0%	0%	*	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Ophthalmology</i></b>							
Within 24 hours	0%	*	*	*	*	*	0%
Within 7 days	0%	0%	*	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Optometry</i></b>							
Within 24 hours	0%	*	*	*	*	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Orthopedics</i></b>							
Within 24 hours	0%	0%	*	*	0%	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	0%	1%	0%	0%	0%	0%
No Referral	99%	100%	99%	99%	100%	99%	99%
<b><i>Pulmonology</i></b>							
Within 24 hours	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Urology</i></b>							
Within 24 hours	0%	*	*	0%	*	*	0%
Within 7 days	0%	0%	0%	*	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Case manager</i></b>							
Within 24 hours	1%	0%	0%	0%	0%	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	99%	100%	99%	100%	100%	100%	99%
<b><i>Substance abuse program</i></b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	99%	100%	100%	100%	100%
<b><i>Health education</i></b>							
Within 24 hours	0%	*	*	0%	*	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b><i>Chaplain</i></b>							
Within 24 hours	0%	0%	*	*	0%	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%
<b>Family support, community service</b>							
Within 24 hours	0%	0%	*	0%	0%	0%	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%
No Referral	99%	99%	99%	99%	100%	100%	99%
<b>Military OneSource</b>							
Within 24 hours	0%	0%	0%	0%	0%	0%	0%
Within 7 days	1%	0%	1%	1%	0%	0%	1%
Within 30 days	3%	3%	3%	3%	0%	1%	3%
No Referral	96%	97%	96%	96%	99%	98%	96%
<b>Other</b>							
Within 24 hours	0%	0%	1%	0%	0%	0%	0%
Within 7 days	2%	1%	2%	1%	0%	1%	1%
Within 30 days	2%	1%	2%	1%	0%	1%	1%
No Referral	96%	98%	96%	98%	99%	99%	97%
<b>11. SM was provided with:</b>							
<b>Health education information</b>							
Not checked	24%	33%	29%	28%	63%	35%	30%
Checked	76%	67%	71%	72%	37%	65%	70%
<b>Health care benefits information</b>							
Not checked	58%	65%	62%	56%	81%	61%	60%
Checked	42%	35%	38%	44%	19%	39%	40%
<b>Appointment assistance</b>							
Not checked	91%	93%	90%	93%	94%	94%	92%
Checked	9%	7%	10%	7%	6%	6%	8%
<b>Member declined to complete form</b>							
Not checked	100%	100%	100%	100%	100%	100%	98%
Checked	0%	0%	0%	0%	0%	0%	2%
<b>Member declined interview</b>							
Not checked	99%	99%	99%	98%	95%	99%	99%
Checked	1%	1%	1%	2%	5%	1%	1%
<b>Member declined referral</b>							
Not checked	95%	95%	95%	95%	95%	96%	95%
Checked	5%	5%	5%	5%	5%	4%	5%
<b>LOD</b>							
Not checked	93%	95%	94%	93%	99%	97%	94%
Checked	7%	5%	6%	7%	1%	3%	6%
<b>Other</b>							
Not checked	98%	98%	99%	98%	99%	98%	98%
Checked	2%	2%	1%	2%	1%	2%	2%
<b>12. Referral was made to:</b>							
<b>Military treatment facility</b>							
Not checked	89%	89%	86%	93%	94%	93%	90%

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Questions in clinician portion of DD 2900	Iraq	Afghanistan	Both Iraq and Afghanistan	Kuwait	Qatar	Other Locations	All
<b>Sample Size</b>	<b>161358</b>	<b>30637</b>	<b>3267</b>	<b>16380</b>	<b>12327</b>	<b>23856</b>	<b>251089</b>
Checked	11%	11%	14%	7%	6%	7%	10%
<b><i>Division/Line-based medical resource</i></b>							
Not checked	98%	99%	98%	99%	100%	99%	98%
Checked	2%	1%	2%	1%	0%	1%	2%
<b><i>VA</i></b>							
Not checked	93%	94%	94%	93%	99%	97%	94%
Checked	7%	6%	6%	7%	1%	3%	6%
<b><i>Vet center</i></b>							
Not checked	98%	98%	98%	98%	100%	99%	98%
Checked	2%	2%	2%	2%	0%	1%	2%
<b><i>TRICARE</i></b>							
Not checked	99%	99%	98%	99%	100%	99%	99%
Checked	1%	1%	2%	1%	0%	1%	1%
<b><i>Contract support</i></b>							
Not checked	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	0%	0%	0%	0%	0%
<b><i>Community service</i></b>							
Not checked	99%	99%	100%	99%	100%	100%	99%
Checked	1%	1%	0%	1%	0%	0%	1%
<b><i>Other</i></b>							
Not checked	96%	97%	97%	97%	98%	98%	97%
Checked	4%	3%	3%	3%	2%	2%	3%
<b><i>None</i></b>							
Not checked	24%	20%	26%	18%	10%	14%	21%
Checked	76%	80%	74%	82%	90%	86%	79%

*\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHRA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.*

*\*\*There were 3,264 SMs who did not indicate a deployment location and are not included in this appendix.*

*\*\*\*Note: Asterisks indicate that there were no SMs endorsing the response.*

**Appendix N: DD Form 2796 and 2900 Items – Descriptive  
Statistics by Service Branch/Component**

**Table N.1 January 2008 DD Form 2796 Items – Descriptive Statistics by Service Branch/Component- OIF/OEF**

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
<b>Gender</b>											
Male	91%	85%	92%	85%	85%	91%	91%	88%	96%	98%	91%
Female	9%	15%	8%	15%	15%	9%	9%	12%	4%	2%	9%
<b>Age</b>											
N	91801	7470	18824	23889	3104	4974	8297	2104	28253	3483	192199
Mean	28.46	34.51	31.24	29.4	36.92	35.75	30.18	37.16	25.41	25.66	29.08
Standard Deviation	6.68	10.17	9.07	7	9.52	9.43	7.3	8.9	5.62	5.69	7.65
Median	27	33	29	28	37	36	29	38	23	24	27
Range	52	48	48	43	46	43	47	45	41	38	52
<b>Race</b>											
Missing	2%	1%	2%	3%	2%	1%	1%	4%	3%	6%	2%
Asian/Pacific Islander	4%	4%	2%	4%	4%	2%	8%	5%	4%	4%	4%
Black	17%	17%	10%	13%	10%	3%	13%	9%	8%	6%	14%
Hispanic	11%	12%	4%	6%	9%	5%	13%	10%	13%	12%	10%
American Indian/Alaskan Native	1%	1%	1%	1%	1%	1%	4%	3%	1%	1%	1%
Other	0%	*	*	1%	0%	0%	1%	2%	0%	0%	0%
White	65%	66%	81%	72%	74%	88%	59%	66%	71%	71%	69%
<b>Education Level</b>											
Bachelor's degree	11%	20%	11%	12%	14%	16%	14%	17%	9%	7%	12%
High school	74%	52%	69%	67%	65%	2%	72%	60%	87%	87%	72%
Master's degree	2%	8%	2%	7%	6%	3%	2%	3%	1%	1%	3%
No high school	1%	2%	2%	0%	1%	0%	1%	0%	0%	0%	1%
Doctorate	1%	3%	1%	2%	2%	1%	2%	1%	0%	0%	1%
Less than 4 years of college	8%	13%	15%	13%	12%	77%	6%	8%	2%	4%	10%
Unknown	2%	1%	0%	0%	0%	0%	2%	10%	1%	0%	2%
<b>Pay Grade</b>											
E01-E04	43%	24%	47%	36%	16%	14%	33%	18%	61%	72%	43%
E05-E06	35%	39%	33%	38%	47%	47%	39%	48%	23%	21%	34%
E07-E09	8%	13%	9%	8%	22%	24%	10%	10%	6%	4%	9%

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
O01-O04	10%	15%	8%	15%	10%	10%	15%	14%	8%	2%	10%
O05-O10	1%	7%	1%	3%	4%	6%	3%	9%	1%	1%	2%
W01-W05	3%	2%	1%	*	*	*	0%	0%	1%	0	2%
<b>Any SM self-reported problems- created index*</b>											
Missing	0%	0%	0%	*	*	*	*	*	*	*	0%
No	19%	13%	17%	33%	22%	23%	29%	17%	29%	16%	22%
Yes	81%	87%	83%	67%	78%	77%	71%	83%	71%	84%	78%
<b>Overall PDHA-total SM self-reported problems- created index*</b>											
N	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Mean	2.34	2.6	2.47	1.3	1.71	1.46	1.7	2.33	1.63	2.34	2.07
Standard deviation	1.88	1.83	1.89	1.32	1.44	1.24	1.64	1.77	1.6	1.73	1.8
Median	2	2	2	1	1	1	1	2	1	2	2
Range	8	8	8	8	7	7	8	8	8	8	8
<b>1-7. General health history- created index*</b>											
N	91729	7469	18808	23853	3103	4967	8057	2067	27462	3414	190929
Mean	1.75	1.98	1.86	1.03	1.31	1.02	1.2	1.74	1.19	1.69	1.55
Standard deviation	1.61	1.73	1.71	1.23	1.42	1.3	1.34	1.64	1.34	1.54	1.56
Median	1	2	1	1	1	1	1	1	1	1	1
Range	7	7	7	7	7	7	7	7	7	7	7
<b>1. Health assessment (past month)</b>											
Missing	0%	0%	0%	0%	0%	0%	4%	4%	4%	3%	1%
Excellent	19%	16%	16%	30%	22%	23%	26%	20%	25%	17%	21%
Very good	33%	34%	34%	39%	40%	40%	38%	36%	35%	35%	35%
Good	36%	37%	38%	25%	32%	31%	26%	31%	29%	35%	33%
Fair	10%	11%	11%	4%	6%	5%	5%	9%	6%	8%	9%
Poor	1%	2%	1%	0%	1%	0%	0%	1%	1%	1%	1%
<b>2. Health change (compared to pre-deployment health)</b>											
Missing	0%	0%	1%	0%	0%	0%	14%	11%	13%	10%	3%
Much better now than before I deployed	7%	6%	7%	13%	9%	6%	0%	0%	0%	0%	6%
Somewhat better now than before I deployed	12%	12%	14%	21%	20%	17%	17%	15%	14%	13%	14%

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
About the same as before I deployed	55%	51%	51%	54%	53%	62%	54%	51%	58%	49%	55%
Somewhat worse now than before I deployed	24%	26%	25%	11%	17%	14%	14%	21%	14%	26%	20%
Much worse now than before I deployed	3%	4%	3%	1%	1%	1%	1%	2%	1%	2%	2%
<b>3. Daily activities difficult: physical problems (past 4 weeks)</b>											
Missing	0%	0%	1%	0%	0%	0%	5%	4%	5%	4%	1%
Not difficult at all	71%	66%	68%	84%	77%	80%	79%	69%	77%	66%	74%
Somewhat difficult	25%	30%	27%	15%	21%	19%	15%	23%	16%	28%	22%
Very difficult	3%	3%	3%	1%	1%	1%	1%	3%	1%	2%	2%
Extremely difficult	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<b>4. Daily activities difficult: emotional problems (past 4 weeks)</b>											
Missing	1%	1%	1%	0%	0%	0%	5%	5%	5%	4%	2%
Not difficult at all	70%	70%	70%	85%	87%	88%	71%	69%	74%	71%	73%
Somewhat difficult	24%	24%	24%	14%	12%	11%	20%	22%	18%	22%	21%
Very difficult	4%	4%	4%	1%	1%	0%	3%	3%	2%	2%	3%
Extremely difficult	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
<b>6. Hospitalized during deployment</b>											
Missing	0%	0%	0%	0%	0%	0%	5%	4%	5%	4%	1%
No	94%	95%	95%	98%	98%	99%	93%	92%	92%	93%	95%
Yes	5%	5%	5%	1%	2%	1%	2%	3%	2%	3%	4%
<b>7. Injured during deployment</b>											
Missing	0%	0%	0%	0%	0%	0%	4%	3%	4%	3%	1%
No	81%	72%	72%	90%	83%	89%	83%	71%	84%	76%	82%
Yes	18%	28%	27%	10%	17%	11%	13%	26%	12%	21%	17%
<b>7a. Problems related to injury</b>											
Missing	70%	64%	67%	90%	83%	89%	88%	75%	89%	80%	77%
No	17%	13%	11%	4%	4%	3%	4%	5%	4%	4%	11%
Yes	11%	20%	18%	5%	11%	6%	6%	15%	5%	13%	10%
Unsure	3%	3%	4%	1%	2%	1%	2%	5%	1%	3%	2%
<b>8. Physical health concerns- created index*</b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
N	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Mean	1.76	1.97	1.89	0.46	0.66	0.43	0.91	1.38	0.96	1.59	1.41
Standard deviation	2.99	3.16	3.13	1.43	1.66	1.37	2.03	2.5	2.23	2.63	2.71
Median	0	0	0	0	0	0	0	0	0	0	0
Range	21	21	21	21	17	21	19	20	21	21	21
<b>8. Physical health concerns- saw a healthcare provider, placed on quarters, and still bothered by symptom</b>											
<i><b>Fever- sick call</b></i>											
Missing	12%	16%	12%	94%	94%	96%	11%	10%	8%	7%	25%
No	79%	73%	81%	1%	0%	1%	82%	81%	87%	86%	67%
Yes	9%	11%	7%	4%	6%	3%	7%	9%	5%	7%	8%
<i><b>Fever- quarters/profile</b></i>											
Missing	34%	38%	36%	97%	98%	99%	38%	39%	36%	34%	45%
No	62%	57%	61%	1%	0%	1%	59%	57%	62%	62%	51%
Yes	4%	5%	4%	2%	2%	1%	3%	4%	2%	3%	3%
<i><b>Fever- still bothered</b></i>											
Missing	34%	39%	36%	99%	99%	99%	39%	40%	36%	35%	46%
No	65%	60%	63%	1%	0%	1%	61%	60%	64%	65%	54%
Yes	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<i><b>Cough lasting three weeks- sick call</b></i>											
Missing	13%	16%	12%	95%	93%	95%	12%	10%	9%	8%	26%
No	80%	73%	81%	1%	0%	1%	83%	80%	88%	88%	68%
Yes	7%	10%	7%	4%	6%	4%	6%	9%	4%	4%	6%
<i><b>Cough lasting three weeks- quarters/profile</b></i>											
Missing	36%	39%	37%	98%	99%	99%	40%	40%	37%	37%	47%
No	63%	58%	62%	1%	0%	1%	59%	58%	62%	62%	52%
Yes	1%	2%	2%	1%	1%	0%	1%	2%	1%	1%	1%
<i><b>Cough lasting three weeks- still bothered</b></i>											
Missing	36%	39%	37%	97%	96%	96%	40%	40%	37%	37%	47%
No	61%	56%	59%	1%	0%	0%	57%	55%	61%	61%	50%
Yes	3%	5%	4%	2%	4%	3%	2%	4%	2%	2%	3%
<i><b>Trouble breathing- sick call</b></i>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	13%	17%	12%	97%	96%	97%	12%	11%	9%	8%	26%
No	81%	76%	82%	1%	0%	1%	84%	83%	88%	88%	69%
Yes	6%	7%	6%	2%	3%	2%	3%	6%	3%	3%	5%
<b><i>Trouble breathing- quarters/profile</i></b>											
Missing	37%	40%	37%	99%	99%	99%	41%	41%	38%	38%	48%
No	62%	58%	61%	1%	0%	1%	58%	57%	62%	61%	51%
Yes	2%	2%	2%	0%	0%	0%	1%	2%	1%	1%	1%
<b><i>Trouble breathing- still bothered</i></b>											
Missing	36%	40%	37%	98%	96%	97%	41%	41%	38%	38%	47%
No	59%	55%	58%	1%	0%	1%	57%	54%	60%	59%	49%
Yes	5%	6%	5%	1%	3%	2%	2%	4%	2%	3%	4%
<b><i>Headache- sick call</i></b>											
Missing	12%	16%	12%	95%	96%	97%	12%	10%	9%	9%	26%
No	76%	73%	79%	1%	0%	1%	81%	81%	85%	85%	66%
Yes	11%	11%	9%	3%	4%	3%	7%	9%	6%	6%	9%
<b><i>Headache- quarters/profile</i></b>											
Missing	35%	39%	37%	98%	99%	99%	40%	40%	37%	38%	47%
No	62%	58%	61%	1%	0%	1%	59%	57%	62%	61%	51%
Yes	3%	3%	3%	1%	1%	0%	2%	2%	1%	1%	2%
<b><i>Headache- still bothered</i></b>											
Missing	34%	38%	35%	96%	96%	97%	39%	40%	37%	37%	45%
No	55%	52%	55%	1%	0%	0%	56%	54%	58%	57%	47%
Yes	10%	11%	10%	3%	3%	2%	5%	6%	5%	6%	8%
<b><i>Feeling weak- sick call</i></b>											
Missing	16%	21%	15%	97%	97%	97%	13%	12%	9%	8%	28%
No	80%	73%	81%	1%	0%	1%	84%	84%	88%	88%	68%
Yes	5%	6%	4%	2%	3%	2%	3%	4%	3%	3%	4%
<b><i>Feeling weak- quarters/profile</i></b>											
Missing	39%	44%	40%	99%	99%	99%	41%	42%	38%	38%	49%
No	60%	54%	58%	1%	0%	0%	58%	56%	61%	61%	50%
Yes	1%	2%	1%	1%	1%	0%	1%	1%	1%	1%	1%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b><i>Feeling weak- still bothered</i></b>											
Missing	38%	44%	40%	98%	98%	98%	41%	43%	38%	38%	49%
No	57%	52%	56%	1%	0%	0%	57%	55%	60%	59%	48%
Yes	4%	5%	4%	1%	2%	1%	2%	3%	2%	3%	3%
<b><i>Muscle ache- sick call</i></b>											
Missing	15%	20%	15%	95%	93%	96%	12%	11%	9%	8%	27%
No	74%	67%	74%	1%	0%	1%	80%	76%	84%	83%	63%
Yes	11%	13%	11%	4%	6%	3%	8%	13%	7%	9%	9%
<b><i>Muscle ache- quarters/profile</i></b>											
Missing	38%	42%	39%	98%	98%	99%	40%	40%	37%	36%	48%
No	59%	53%	58%	1%	0%	0%	58%	57%	61%	61%	49%
Yes	3%	5%	4%	1%	1%	1%	2%	3%	1%	2%	3%
<b><i>Muscle ache- still bothered</i></b>											
Missing	37%	40%	37%	96%	94%	97%	40%	39%	37%	35%	47%
No	54%	46%	51%	1%	0%	0%	54%	50%	58%	53%	45%
Yes	10%	13%	11%	3%	5%	3%	6%	11%	6%	12%	8%
<b><i>Joints- sick call</i></b>											
Missing	15%	20%	14%	95%	93%	95%	12%	10%	9%	7%	27%
No	70%	61%	68%	1%	0%	1%	77%	72%	81%	76%	60%
Yes	16%	19%	18%	4%	7%	4%	11%	18%	10%	17%	13%
<b><i>Joints- quarters/profile</i></b>											
Missing	36%	40%	37%	98%	98%	99%	39%	38%	37%	34%	47%
No	57%	52%	56%	1%	0%	0%	58%	57%	61%	61%	48%
Yes	6%	8%	7%	1%	2%	1%	3%	5%	2%	5%	5%
<b><i>Joints- still bothered</i></b>											
Missing	35%	37%	34%	94%	91%	95%	38%	36%	36%	32%	45%
No	48%	41%	45%	1%	0%	0%	51%	45%	54%	47%	41%
Yes	17%	22%	20%	5%	9%	5%	11%	19%	11%	22%	14%
<b><i>Back pain- sick call</i></b>											
Missing	14%	19%	13%	94%	93%	95%	12%	11%	9%	7%	26%
No	69%	62%	69%	1%	0%	1%	76%	73%	80%	76%	59%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Yes	17%	19%	18%	5%	6%	4%	12%	16%	11%	17%	14%
<b><i>Back pain- quarters/profile</i></b>											
Missing	36%	40%	36%	98%	98%	99%	39%	39%	36%	33%	46%
No	58%	53%	57%	1%	0%	0%	58%	56%	62%	62%	49%
Yes	6%	7%	7%	1%	2%	1%	3%	5%	2%	4%	5%
<b><i>Back pain- still bothered</i></b>											
Missing	33%	37%	33%	93%	92%	94%	37%	38%	35%	30%	44%
No	47%	42%	45%	1%	0%	0%	51%	47%	53%	45%	40%
Yes	20%	21%	21%	6%	8%	6%	12%	16%	12%	25%	16%
<b><i>Numbness in hands or feet- sick call</i></b>											
Missing	15%	21%	15%	98%	98%	98%	13%	11%	9%	9%	28%
No	78%	71%	78%	1%	0%	1%	83%	79%	87%	85%	67%
Yes	7%	8%	8%	1%	2%	1%	4%	9%	4%	6%	5%
<b><i>Numbness in hands or feet- quarters/profile</i></b>											
Missing	38%	43%	39%	99%	99%	99%	41%	41%	38%	38%	49%
No	60%	54%	58%	1%	0%	0%	58%	57%	61%	61%	50%
Yes	2%	3%	2%	0%	1%	0%	1%	2%	1%	2%	1%
<b><i>Numbness in hands or feet- still bothered</i></b>											
Missing	37%	42%	38%	97%	97%	98%	41%	40%	38%	36%	48%
No	54%	48%	52%	1%	0%	0%	55%	50%	58%	54%	45%
Yes	9%	10%	10%	2%	3%	2%	4%	10%	4%	10%	7%
<b><i>Trouble hearing- sick call</i></b>											
Missing	15%	21%	14%	98%	99%	99%	13%	12%	9%	8%	28%
No	80%	74%	80%	1%	0%	1%	85%	83%	87%	86%	68%
Yes	5%	5%	5%	1%	1%	0%	2%	5%	4%	6%	4%
<b><i>Trouble hearing- quarters/profile</i></b>											
Missing	39%	44%	40%	99%	100%	99%	41%	42%	38%	37%	49%
No	60%	55%	59%	1%	0%	0%	58%	57%	62%	62%	50%
Yes	1%	1%	1%	0%	0%	0%	0%	0%	1%	1%	1%
<b><i>Trouble hearing- still bothered</i></b>											
Missing	38%	42%	38%	98%	98%	98%	41%	42%	37%	36%	48%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
No	54%	49%	52%	1%	0%	0%	55%	51%	56%	53%	45%
Yes	8%	9%	10%	2%	2%	1%	4%	7%	7%	12%	7%
<b><i>Ringling in the ears- sick call</i></b>											
Missing	15%	21%	15%	98%	99%	99%	13%	12%	9%	9%	28%
No	80%	74%	79%	1%	0%	1%	84%	83%	87%	86%	68%
Yes	5%	5%	6%	1%	1%	1%	3%	5%	4%	5%	4%
<b><i>Ringling in the ears- quarters/profile</i></b>											
Missing	39%	44%	40%	99%	100%	99%	41%	42%	38%	38%	49%
No	60%	55%	59%	1%	0%	0%	59%	57%	61%	62%	50%
Yes	1%	1%	1%	0%	0%	0%	0%	1%	1%	1%	1%
<b><i>Ringling in the ears- still bothered</i></b>											
Missing	38%	42%	37%	98%	97%	98%	41%	42%	37%	36%	48%
No	55%	49%	51%	1%	0%	0%	55%	52%	57%	54%	46%
Yes	7%	9%	11%	2%	3%	2%	4%	6%	6%	9%	6%
<b><i>Watery, red eyes- sick call</i></b>											
Missing	15%	21%	15%	97%	97%	97%	13%	12%	9%	9%	28%
No	81%	74%	81%	1%	0%	1%	84%	83%	88%	88%	69%
Yes	3%	5%	4%	2%	2%	2%	3%	5%	2%	2%	3%
<b><i>Watery, red eyes- quarters/profile</i></b>											
Missing	39%	44%	40%	99%	100%	99%	41%	42%	38%	39%	49%
No	60%	55%	59%	1%	0%	0%	58%	57%	61%	61%	50%
Yes	0%	1%	1%	0%	0%	0%	0%	1%	0%	0%	0%
<b><i>Watery, red eyes- still bothered</i></b>											
Missing	38%	43%	40%	98%	97%	98%	42%	42%	38%	39%	49%
No	58%	52%	57%	1%	0%	0%	56%	54%	60%	59%	48%
Yes	3%	5%	4%	1%	3%	2%	2%	5%	2%	3%	3%
<b><i>Dimming of vision- sick call</i></b>											
Missing	15%	21%	14%	99%	99%	99%	13%	12%	9%	9%	28%
No	84%	78%	85%	1%	0%	1%	86%	87%	90%	90%	71%
Yes	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
<b><i>Dimming of vision- quarters/profile</i></b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	39%	44%	40%	99%	100%	100%	42%	43%	39%	39%	50%
No	60%	55%	59%	1%	0%	0%	58%	57%	61%	60%	50%
Yes	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
<i>Dimming of vision- still bothered</i>											
Missing	39%	44%	40%	99%	100%	99%	42%	43%	39%	39%	50%
No	60%	54%	59%	1%	0%	0%	57%	56%	60%	60%	49%
Yes	1%	2%	1%	0%	0%	0%	0%	1%	1%	1%	1%
<i>Chest pain or pressure- sick call</i>											
Missing	15%	20%	14%	98%	99%	99%	13%	12%	9%	9%	28%
No	81%	75%	83%	1%	0%	1%	85%	85%	89%	88%	69%
Yes	4%	5%	3%	1%	1%	1%	2%	3%	2%	2%	3%
<i>Chest pain or pressure- quarters/profile</i>											
Missing	39%	44%	40%	99%	100%	99%	42%	42%	39%	39%	49%
No	60%	55%	59%	1%	0%	0%	58%	57%	61%	60%	50%
Yes	1%	1%	1%	0%	0%	0%	0%	1%	0%	1%	1%
<i>Chest pain or pressure- still bothered</i>											
Missing	38%	43%	40%	99%	99%	99%	42%	42%	39%	39%	49%
No	58%	53%	58%	1%	0%	0%	57%	56%	60%	59%	49%
Yes	3%	3%	3%	1%	1%	1%	1%	2%	2%	2%	2%
<i>Dizzy- sick call</i>											
Missing	15%	20%	14%	97%	98%	99%	13%	12%	9%	9%	28%
No	81%	75%	82%	1%	0%	1%	85%	84%	88%	88%	69%
Yes	4%	5%	4%	2%	2%	1%	2%	4%	2%	2%	3%
<i>Dizzy- quarters/profile</i>											
Missing	39%	43%	40%	99%	99%	99%	41%	42%	39%	39%	49%
No	60%	55%	59%	1%	0%	0%	58%	56%	61%	60%	50%
Yes	2%	2%	1%	1%	1%	0%	1%	2%	1%	1%	1%
<i>Dizzy- still bothered</i>											
Missing	38%	43%	39%	99%	99%	99%	42%	42%	38%	39%	49%
No	59%	54%	58%	1%	0%	0%	57%	56%	60%	60%	49%
Yes	3%	3%	3%	1%	1%	0%	1%	2%	1%	1%	2%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b><i>Diarrhea- sick call</i></b>											
Missing	13%	19%	13%	94%	95%	96%	12%	10%	9%	8%	26%
No	71%	68%	76%	1%	0%	1%	78%	75%	81%	79%	62%
Yes	15%	13%	11%	5%	4%	3%	10%	14%	11%	13%	12%
<b><i>Diarrhea- quarters/profile</i></b>											
Missing	36%	41%	38%	98%	98%	99%	39%	39%	37%	35%	47%
No	60%	55%	59%	1%	0%	0%	58%	57%	61%	61%	50%
Yes	4%	4%	3%	2%	1%	1%	3%	4%	3%	4%	3%
<b><i>Diarrhea- still bothered</i></b>											
Missing	35%	40%	37%	98%	98%	98%	39%	38%	36%	34%	46%
No	61%	56%	59%	1%	0%	0%	59%	59%	62%	62%	51%
Yes	4%	4%	4%	1%	2%	2%	2%	3%	2%	4%	3%
<b><i>Vomiting- sick call</i></b>											
Missing	15%	20%	14%	96%	97%	98%	13%	12%	9%	8%	28%
No	78%	74%	81%	1%	0%	1%	83%	84%	85%	85%	67%
Yes	7%	5%	5%	3%	3%	1%	4%	4%	6%	6%	6%
<b><i>Vomiting- quarters/profile</i></b>											
Missing	38%	43%	40%	98%	98%	99%	41%	42%	38%	37%	49%
No	58%	54%	58%	1%	0%	0%	57%	55%	60%	59%	49%
Yes	3%	3%	2%	2%	1%	0%	2%	3%	2%	3%	3%
<b><i>Vomiting- still bothered</i></b>											
Missing	38%	43%	39%	99%	100%	99%	41%	42%	38%	37%	49%
No	61%	56%	60%	1%	0%	0%	58%	57%	62%	62%	51%
Yes	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	1%
<b><i>Frequent indigestion/heartburn- sick call</i></b>											
Missing	15%	20%	14%	98%	99%	99%	13%	12%	9%	9%	28%
No	80%	75%	81%	1%	0%	1%	83%	84%	88%	88%	68%
Yes	5%	6%	5%	1%	1%	1%	4%	4%	3%	3%	4%
<b><i>Frequent indigestion/heartburn- quarters/profile</i></b>											
Missing	39%	44%	40%	99%	100%	100%	41%	42%	38%	39%	49%
No	61%	56%	60%	1%	0%	0%	58%	57%	61%	61%	50%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Yes	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	0%
<b><i>Frequent indigestion/heartburn- still bothered</i></b>											
Missing	38%	42%	38%	98%	98%	98%	41%	42%	38%	38%	48%
No	56%	51%	55%	1%	0%	0%	55%	53%	59%	58%	47%
Yes	6%	7%	7%	1%	2%	1%	3%	5%	3%	4%	5%
<b><i>Sleeping problems/tired- sick call</i></b>											
Missing	13%	17%	12%	95%	96%	96%	12%	10%	9%	8%	26%
No	72%	69%	73%	1%	0%	1%	78%	77%	83%	85%	62%
Yes	15%	14%	15%	4%	4%	3%	10%	13%	8%	7%	12%
<b><i>Sleeping problems/tired- quarters/profile</i></b>											
Missing	36%	39%	37%	99%	100%	99%	39%	40%	37%	37%	47%
No	63%	58%	61%	1%	0%	0%	60%	58%	62%	62%	52%
Yes	2%	2%	2%	0%	0%	0%	1%	2%	1%	1%	1%
<b><i>Sleeping problems/tired- still bothered</i></b>											
Missing	33%	36%	33%	93%	92%	94%	38%	38%	36%	35%	44%
No	45%	41%	44%	1%	0%	0%	50%	46%	53%	49%	39%
Yes	22%	23%	23%	6%	8%	6%	13%	17%	11%	17%	18%
<b><i>Trouble concentrating- sick call</i></b>											
Missing	14%	19%	13%	98%	99%	99%	13%	12%	9%	9%	27%
No	81%	76%	82%	1%	0%	1%	85%	86%	88%	89%	69%
Yes	5%	6%	5%	0%	0%	0%	2%	3%	3%	2%	4%
<b><i>Trouble concentrating- quarters/profile</i></b>											
Missing	38%	42%	39%	99%	100%	100%	41%	43%	39%	39%	49%
No	62%	57%	60%	1%	0%	0%	58%	57%	61%	61%	51%
Yes	1%	1%	1%	0%	0%	0%	0%	1%	0%	0%	0%
<b><i>Trouble concentrating- still bothered</i></b>											
Missing	36%	41%	37%	98%	98%	98%	42%	42%	38%	39%	48%
No	54%	49%	53%	1%	0%	0%	54%	53%	57%	56%	45%
Yes	10%	10%	9%	1%	1%	1%	4%	4%	5%	5%	7%
<b><i>Trouble with memory- sick call</i></b>											
Missing	14%	19%	14%	98%	99%	99%	13%	12%	9%	9%	28%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
No	81%	76%	82%	1%	0%	1%	85%	86%	88%	89%	69%
Yes	5%	5%	5%	0%	0%	0%	2%	3%	3%	2%	4%
<b><i>Trouble with memory- quarters/profile</i></b>											
Missing	38%	43%	39%	99%	100%	100%	41%	42%	38%	38%	49%
No	62%	57%	60%	1%	0%	0%	59%	57%	61%	61%	51%
Yes	1%	1%	1%	0%	0%	*	0%	0%	0%	0%	0%
<b><i>Trouble with memory- still bothered</i></b>											
Missing	36%	41%	37%	98%	98%	98%	41%	42%	38%	38%	47%
No	53%	48%	53%	1%	0%	0%	55%	53%	57%	56%	45%
Yes	11%	10%	10%	2%	2%	1%	4%	5%	5%	6%	8%
<b><i>Indecisive- sick call</i></b>											
Missing	14%	20%	14%	99%	100%	99%	13%	12%	10%	9%	28%
No	83%	78%	84%	1%	0%	1%	86%	87%	89%	90%	71%
Yes	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	2%
<b><i>Indecisive- quarters/profile</i></b>											
Missing	39%	43%	40%	99%	100%	100%	41%	43%	39%	39%	49%
No	61%	57%	60%	1%	0%	0%	58%	57%	61%	60%	51%
Yes	0%	0%	0%	0%	*	*	0%	0%	0%	0%	0%
<b><i>Indecisive- still bothered</i></b>											
Missing	38%	43%	39%	99%	99%	99%	42%	43%	39%	39%	49%
No	58%	53%	57%	1%	0%	0%	56%	55%	59%	59%	48%
Yes	5%	5%	4%	1%	0%	0%	2%	2%	2%	2%	3%
<b><i>Increased irritability- sick call</i></b>											
Missing	14%	19%	13%	98%	99%	99%	13%	12%	9%	9%	27%
No	78%	74%	78%	1%	0%	1%	83%	83%	86%	87%	67%
Yes	8%	7%	8%	1%	0%	0%	4%	6%	4%	4%	6%
<b><i>Increased irritability- quarters/profile</i></b>											
Missing	37%	42%	39%	99%	100%	100%	40%	42%	38%	38%	48%
No	62%	57%	60%	1%	0%	0%	59%	58%	61%	62%	51%
Yes	1%	1%	1%	0%	*	0%	1%	1%	1%	1%	1%
<b><i>Increased irritability- still bothered</i></b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	35%	40%	36%	97%	97%	98%	40%	41%	37%	37%	46%
No	49%	46%	48%	1%	0%	0%	53%	51%	55%	52%	42%
Yes	16%	14%	16%	3%	3%	2%	7%	8%	8%	11%	12%
<b><i>Skin disease or rash- sick call</i></b>											
Missing	12%	16%	12%	94%	94%	95%	13%	11%	9%	9%	25%
No	79%	74%	81%	1%	0%	1%	81%	80%	85%	84%	67%
Yes	8%	10%	8%	5%	5%	4%	6%	10%	6%	8%	7%
<b><i>Skin disease or rash- quarters/profile</i></b>											
Missing	36%	39%	37%	99%	99%	99%	40%	40%	38%	37%	47%
No	63%	60%	62%	1%	0%	0%	59%	58%	61%	61%	52%
Yes	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
<b><i>Skin disease or rash- still bothered</i></b>											
Missing	35%	37%	36%	97%	96%	97%	40%	39%	37%	37%	46%
No	60%	54%	58%	1%	0%	1%	56%	53%	59%	57%	49%
Yes	6%	9%	6%	2%	4%	3%	4%	7%	4%	6%	5%
<b><i>Other- sick call</i></b>											
Missing	39%	41%	38%	91%	89%	90%	21%	20%	15%	17%	43%
No	53%	44%	52%	1%	0%	0%	73%	67%	80%	74%	49%
Yes	8%	15%	11%	8%	11%	9%	6%	13%	5%	9%	8%
<b><i>Other- quarters/profile</i></b>											
Missing	54%	54%	52%	97%	97%	98%	45%	46%	41%	42%	58%
No	43%	40%	43%	1%	0%	0%	54%	50%	57%	54%	38%
Yes	4%	6%	4%	2%	3%	2%	2%	4%	2%	3%	3%
<b><i>Other- still bothered</i></b>											
Missing	53%	53%	52%	96%	93%	95%	45%	45%	41%	42%	57%
No	41%	35%	40%	1%	0%	0%	52%	47%	56%	52%	37%
Yes	6%	12%	8%	4%	7%	5%	4%	8%	3%	6%	6%
<b>9d. Have any TBI symptoms- created index*</b>											
Missing	18%	17%	19%	19%	28%	20%	21%	24%	17%	19%	18%
No	70%	71%	70%	79%	71%	79%	73%	67%	78%	76%	73%
Yes	12%	12%	11%	1%	1%	1%	6%	8%	5%	5%	9%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b>9d. TBI symptoms- created index*</b>											
N	75529	6185	15312	19233	2232	3979	6542	1592	23392	2836	156832
Mean	0.34	0.35	0.35	0.03	0.04	0.02	0.14	0.22	0.11	0.12	0.24
Standard deviation	0.97	1.02	1.02	0.32	0.35	0.23	0.58	0.74	0.54	0.54	0.83
Median	0	0	0	0	0	0	0	0	0	0	0
Range	6	6	6	6	6	6	6	6	6	6	6
<b>9a. Experienced following event:</b>											
<i>Blast or explosion</i>											
Missing	1%	1%	1%	0%	0%	0%	6%	5%	6%	4%	2%
No	73%	78%	77%	86%	82%	88%	78%	78%	85%	89%	78%
Yes	26%	20%	22%	14%	18%	12%	16%	17%	10%	7%	20%
<i>Crash</i>											
Missing	2%	2%	1%	0%	0%	0%	6%	5%	6%	4%	2%
No	93%	94%	93%	97%	98%	98%	90%	92%	92%	92%	93%
Yes	6%	4%	6%	3%	2%	2%	3%	3%	3%	4%	4%
<i>Fragment/bullet wound (above shoulders)</i>											
Missing	2%	2%	1%	0%	0%	0%	7%	5%	6%	4%	2%
No	98%	98%	98%	100%	100%	100%	93%	95%	94%	96%	97%
Yes	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<i>Fall</i>											
Missing	2%	2%	1%	0%	0%	0%	7%	5%	6%	4%	2%
No	86%	85%	87%	96%	93%	96%	88%	85%	88%	85%	88%
Yes	12%	13%	12%	4%	7%	3%	5%	10%	6%	11%	9%
<i>Other injury</i>											
Missing	6%	5%	5%	0%	0%	0%	7%	6%	7%	5%	5%
No	87%	85%	87%	93%	87%	91%	86%	82%	88%	85%	88%
Yes	7%	10%	9%	7%	13%	8%	6%	13%	5%	10%	7%
<b>9b. Problems immediately after event (from 9a)</b>											
<i>Knocked out</i>											
Missing	34%	29%	37%	77%	68%	78%	75%	66%	81%	76%	51%
No	64%	70%	62%	23%	31%	21%	25%	33%	18%	23%	48%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Yes	2%	1%	2%	0%	0%	0%	1%	1%	1%	1%	1%
<b><i>Dazed</i></b>											
Missing	34%	29%	36%	77%	68%	78%	75%	66%	81%	76%	51%
No	58%	65%	57%	21%	30%	21%	23%	31%	16%	20%	43%
Yes	8%	6%	7%	2%	2%	1%	2%	3%	3%	3%	6%
<b><i>Memory loss of event</i></b>											
Missing	34%	29%	37%	77%	68%	78%	75%	66%	81%	76%	51%
No	64%	70%	62%	23%	31%	21%	25%	33%	18%	23%	48%
Yes	2%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%
<b><i>Concussion</i></b>											
Missing	34%	29%	37%	77%	68%	78%	75%	66%	81%	76%	51%
No	64%	70%	61%	23%	31%	21%	25%	34%	18%	23%	47%
Yes	2%	2%	2%	0%	0%	0%	1%	0%	1%	1%	2%
<b><i>Head injury</i></b>											
Missing	34%	29%	37%	77%	68%	78%	75%	66%	81%	76%	51%
No	63%	69%	61%	22%	31%	21%	25%	33%	18%	22%	47%
Yes	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	2%
<b>9c. Problems got worse after event (from 9a)</b>											
<b><i>Memory lapses</i></b>											
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	45%	52%	41%	4%	4%	2%	25%	33%	18%	23%	33%
Yes	3%	3%	3%	0%	0%	0%	1%	1%	1%	1%	2%
<b><i>Dizziness</i></b>											
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	46%	52%	41%	4%	4%	2%	25%	33%	18%	23%	33%
Yes	2%	3%	3%	0%	0%	0%	1%	1%	1%	1%	2%
<b><i>Ringings in ears</i></b>											
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	43%	50%	38%	4%	3%	2%	23%	31%	16%	21%	31%
Yes	5%	5%	6%	1%	1%	0%	2%	4%	3%	3%	4%
<b><i>Sensitive to light</i></b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	46%	52%	41%	4%	4%	2%	25%	33%	18%	23%	33%
Yes	2%	3%	2%	0%	0%	0%	1%	2%	1%	1%	2%
<b><i>Irritability</i></b>											
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	42%	49%	38%	4%	3%	2%	22%	30%	17%	21%	30%
Yes	6%	6%	6%	1%	1%	0%	3%	4%	2%	3%	4%
<b><i>Headaches</i></b>											
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	42%	49%	38%	3%	3%	2%	23%	30%	16%	21%	30%
Yes	6%	6%	6%	1%	1%	0%	3%	4%	2%	3%	5%
<b><i>Sleep problems</i></b>											
Missing	52%	45%	56%	96%	96%	98%	75%	66%	81%	76%	65%
No	40%	47%	36%	3%	3%	2%	21%	27%	16%	20%	29%
Yes	8%	8%	8%	1%	1%	0%	5%	7%	3%	4%	6%
<b>9d. Symptoms in past week (from 9c)</b>											
<b><i>Memory lapses</i></b>											
Missing	54%	47%	58%	98%	98%	99%	94%	92%	97%	95%	71%
No	43%	50%	40%	2%	2%	1%	5%	7%	3%	5%	27%
Yes	3%	3%	2%	0%	0%	0%	1%	1%	1%	1%	2%
<b><i>Dizziness</i></b>											
Missing	54%	47%	58%	97%	98%	99%	94%	93%	97%	94%	71%
No	44%	51%	40%	2%	2%	1%	5%	7%	3%	5%	28%
Yes	2%	2%	2%	0%	0%	0%	0%	1%	0%	1%	1%
<b><i>Ring in ears</i></b>											
Missing	54%	47%	58%	97%	98%	99%	93%	91%	95%	94%	70%
No	42%	49%	37%	2%	2%	1%	5%	7%	3%	5%	27%
Yes	4%	4%	5%	0%	1%	0%	1%	2%	2%	2%	3%
<b><i>Sensitive to light</i></b>											
Missing	54%	47%	58%	97%	98%	99%	94%	92%	97%	95%	71%
No	44%	50%	40%	2%	2%	1%	5%	7%	3%	5%	28%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Yes	2%	3%	2%	0%	0%	0%	0%	1%	1%	0%	1%
<b>Irritability</b>											
Missing	54%	47%	58%	97%	98%	99%	92%	90%	96%	93%	70%
No	39%	47%	36%	2%	2%	1%	5%	7%	2%	5%	25%
Yes	6%	6%	6%	1%	1%	0%	3%	3%	2%	2%	4%
<b>Headaches</b>											
Missing	54%	47%	58%	97%	98%	99%	93%	90%	95%	94%	70%
No	40%	47%	36%	2%	2%	1%	5%	7%	3%	4%	26%
Yes	6%	6%	6%	1%	0%	0%	2%	3%	2%	2%	4%
<b>Sleep problems</b>											
Missing	54%	47%	58%	97%	97%	99%	91%	88%	95%	93%	70%
No	37%	45%	34%	2%	2%	1%	5%	6%	3%	4%	24%
Yes	8%	9%	8%	1%	1%	0%	4%	6%	3%	3%	6%
<b>10. Encounter dead bodies or see people killed or wounded during deployment</b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	58%	69%	68%	78%	75%	84%	76%	82%	82%	80%	68%
Yes	37%	25%	27%	21%	25%	16%	24%	18%	18%	20%	29%
<b>Enemy</b>											
Missing	*	*	*	0%	*	*	*	*	*	*	0%
Not checked	79%	86%	86%	88%	85%	90%	86%	91%	92%	93%	84%
Checked	21%	14%	14%	12%	15%	10%	14%	9%	8%	7%	16%
<b>Coalition member</b>											
Missing	*	*	*	*	*	0%	*	*	*	*	0%
Not checked	78%	87%	87%	90%	90%	95%	89%	91%	91%	93%	84%
Checked	22%	13%	13%	10%	10%	5%	11%	9%	9%	7%	16%
<b>Civilian</b>											
Not checked	82%	87%	87%	90%	88%	95%	90%	93%	93%	89%	86%
Checked	18%	13%	13%	10%	12%	5%	10%	7%	7%	11%	14%
<b>11. Discharged weapon in combat</b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	80%	91%	86%	97%	98%	98%	95%	98%	93%	99%	87%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Yes	16%	4%	10%	3%	2%	2%	4%	2%	7%	1%	10%
<b>On land</b>											
Not checked	86%	97%	91%	99%	100%	100%	96%	99%	94%	99%	91%
Checked	14%	3%	9%	1%	0%	0%	4%	1%	6%	1%	9%
<b>At sea</b>											
Not checked	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	*	0%	*	0%	0%	*	0%	*	0%
<b>In air</b>											
Not checked	99%	100%	100%	98%	99%	99%	100%	100%	100%	100%	99%
Checked	1%	0%	0%	2%	1%	1%	0%	0%	0%	0%	1%
<b>12. Felt danger of being killed</b>											
Missing	4%	5%	4%	1%	1%	0%	5%	3%	4%	2%	4%
No	63%	65%	65%	85%	83%	91%	74%	72%	79%	78%	70%
Yes	33%	30%	31%	14%	17%	9%	21%	24%	17%	19%	26%
<b>13. Any PTSD symptoms- created index*</b>											
Missing	4%	5%	4%	0%	0%	0%	5%	4%	4%	3%	4%
No	84%	83%	84%	95%	95%	97%	88%	90%	91%	92%	87%
Yes	12%	12%	12%	5%	5%	3%	7%	7%	5%	5%	9%
<b>13. PTSD symptoms- created index*</b>											
N	88078	7080	18050	23817	3100	4964	7884	2027	27054	3391	185445
Mean	0.19	0.2	0.2	0.07	0.07	0.04	0.11	0.1	0.08	0.08	0.15
Standard deviation	0.53	0.55	0.54	0.32	0.31	0.23	0.42	0.39	0.35	0.34	0.47
Median	0	0	0	0	0	0	0	0	0	0	0
Range	2	2	2	2	2	2	2	2	2	2	2
<b>13a. Nightmares about upsetting experience (past month)</b>											
Missing	4%	5%	4%	0%	0%	0%	5%	4%	4%	3%	4%
No	86%	85%	85%	96%	96%	98%	89%	91%	91%	93%	89%
Yes	10%	10%	10%	4%	4%	2%	6%	5%	4%	4%	8%
<b>13b. Tried not to think about upsetting experience (past month)</b>											
Missing	4%	5%	4%	0%	0%	0%	5%	4%	4%	3%	4%
No	88%	86%	87%	97%	97%	98%	90%	91%	92%	94%	90%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Yes	8%	9%	8%	3%	3%	2%	5%	5%	3%	4%	6%
<b>13c. Constantly on guard or easily startled (past month)</b>											
Missing	4%	5%	4%	0%	0%	0%	5%	4%	4%	3%	4%
No	83%	81%	80%	94%	93%	95%	86%	87%	89%	90%	86%
Yes	13%	14%	15%	6%	6%	4%	9%	9%	7%	7%	11%
<b>13d. Numb or detached from others (past month)</b>											
Missing	4%	6%	4%	0%	0%	0%	5%	4%	5%	3%	4%
No	87%	85%	86%	97%	97%	98%	90%	90%	92%	92%	89%
Yes	9%	9%	9%	3%	2%	2%	5%	6%	4%	5%	7%
<b>14. Any depressive symptoms- created index*</b>											
Missing	4%	6%	5%	0%	0%	0%	71%	65%	72%	63%	18%
No	85%	85%	85%	97%	97%	98%	24%	28%	21%	29%	73%
Yes	11%	9%	11%	3%	3%	2%	5%	6%	7%	8%	9%
<b>14. Depressive symptoms- created index*</b>											
N	87878	7002	17958	23803	3100	4961	2435	730	8012	1305	157184
Mean	0.16	0.13	0.16	0.04	0.04	0.02	0.26	0.28	0.34	0.3	0.14
Standard deviation	0.47	0.42	0.46	0.24	0.24	0.18	0.58	0.63	0.64	0.61	0.45
Median	0	0	0	0	0	0	0	0	0	0	0
Range	2	2	2	2	2	2	2	2	2	2	2
<b>14a. Little interest in things (past month)</b>											
Missing	4%	6%	5%	0%	0%	0%	75%	71%	76%	67%	19%
Not at all	64%	63%	64%	85%	84%	87%	3%	3%	0%	0%	54%
Few or several days	23%	24%	23%	12%	14%	11%	18%	21%	18%	26%	20%
More than half the days	5%	4%	5%	2%	1%	1%	3%	4%	4%	5%	4%
Nearly every day	3%	2%	3%	1%	1%	0%	2%	2%	2%	2%	3%
<b>14b. Feeling down or hopeless (past month)</b>											
Missing	4%	7%	5%	0%	0%	0%	77%	71%	79%	73%	20%
Not at all	67%	64%	66%	87%	85%	89%	3%	3%	0%	0%	56%
Few or several days	22%	24%	23%	11%	13%	10%	18%	22%	17%	23%	19%
More than half the days	4%	3%	4%	1%	1%	1%	2%	3%	3%	3%	3%
Nearly every day	2%	2%	2%	0%	1%	0%	1%	1%	1%	1%	2%

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b>15. Alcohol problems- created index*</b>											
Missing	4%	5%	5%	1%	0%	0%	13%	11%	10%	6%	5%
No	64%	70%	68%	83%	83%	77%	57%	64%	53%	50%	65%
Yes	32%	25%	28%	16%	16%	22%	29%	26%	37%	44%	30%
<b>15a. Used alcohol more than meant to (past month)</b>											
Missing	4%	5%	4%	0%	0%	0%	5%	3%	5%	3%	3%
No	93%	93%	93%	99%	100%	99%	93%	95%	93%	92%	94%
Yes	3%	3%	3%	0%	0%	0%	1%	2%	2%	5%	2%
<b>15b. Wanted or needed to cut down on alcohol (past month)</b>											
Missing	4%	5%	4%	1%	0%	0%	6%	4%	5%	3%	4%
No	93%	92%	93%	99%	99%	99%	93%	95%	92%	92%	94%
Yes	3%	3%	3%	0%	0%	0%	1%	1%	3%	4%	2%
<b>15c. How often drink alcohol</b>											
Missing	5%	6%	5%	1%	0%	0%	44%	41%	48%	38%	13%
Never	41%	41%	44%	46%	43%	32%	1%	2%	0%	0%	33%
Monthly or less	17%	20%	20%	27%	29%	30%	23%	27%	18%	20%	20%
2 to 4 times a month	18%	18%	17%	19%	20%	28%	18%	18%	17%	20%	18%
2 to 3 times a week	14%	11%	10%	6%	7%	9%	11%	9%	12%	15%	12%
4 or more times a week	6%	4%	4%	1%	1%	1%	3%	3%	5%	6%	4%
<b>15d. How many drinks per day when drinking</b>											
Missing	44%	47%	48%	26%	25%	18%	87%	90%	79%	75%	49%
1 or 2	27%	30%	25%	54%	56%	57%	1%	1%	0%	0%	25%
3 or 4	17%	15%	15%	17%	17%	20%	9%	6%	12%	13%	15%
5 or 6	8%	6%	7%	3%	2%	3%	2%	2%	5%	6%	6%
7 to 9	2%	1%	2%	1%	0%	1%	1%	0%	4%	5%	2%
10 or more	2%	1%	2%	0%	0%	0%	0%	0%	0%	0%	2%
<b>15e. How often six or more drinks on one occasion</b>											
Missing	31%	26%	33%	2%	1%	2%	17%	15%	13%	8%	22%
Never	29%	40%	29%	69%	69%	58%	2%	3%	0%	0%	29%
Less than monthly	22%	20%	21%	24%	25%	33%	45%	52%	41%	37%	27%
Monthly	10%	8%	9%	4%	4%	6%	26%	23%	25%	28%	12%

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Weekly	8%	5%	6%	1%	1%	1%	7%	5%	12%	15%	7%
Daily	1%	1%	1%	0%	*	0%	3%	2%	9%	11%	2%
<b>16-19. Have any exposure concerns- created index*</b>											
Missing	0%	0%	0%	*	*	*	0%	0%	0%	*	0%
No	47%	31%	38%	46%	32%	33%	54%	34%	60%	45%	47%
Yes	52%	68%	61%	54%	68%	67%	46%	66%	40%	55%	53%
<b>16-19. Exposure concerns- created index*</b>											
N	91497	7438	18769	23889	3104	4974	8291	2103	28252	3483	191800
Mean	2.77	3.84	3.49	2.5	3.4	3.41	2.06	3.26	1.89	3.17	2.73
Standard deviation	4.1	4.44	4.51	3.5	3.84	3.94	3.37	3.96	3.46	4.5	4
Median	1	2	2	1	2	2	0	2	0	1	1
Range	21	21	21	21	20	21	21	21	21	21	21
<b>16. Reported exposure concerns</b>											
<i>Animal bites</i>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	2%
No	94%	94%	95%	99%	99%	99%	99%	99%	99%	98%	96%
Yes	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	1%
<i>Animal bodies (dead)</i>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	2%
No	91%	90%	91%	97%	98%	98%	97%	97%	97%	93%	93%
Yes	5%	5%	6%	3%	2%	2%	3%	3%	3%	7%	4%
<i>Chlorine gas</i>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	95%	93%	95%	99%	100%	99%	99%	98%	99%	98%	97%
Yes	1%	2%	1%	0%	0%	1%	1%	1%	1%	2%	1%
<i>Depleted uranium</i>											
Missing	4%	4%	3%	0%	0%	0%	0%	0%	0%	*	2%
No	95%	94%	95%	99%	99%	98%	99%	98%	99%	98%	97%
Yes	1%	2%	2%	1%	1%	2%	1%	2%	1%	2%	1%
<i>Excessive vibration</i>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
No	86%	82%	82%	93%	94%	91%	95%	92%	94%	86%	88%
Yes	9%	14%	14%	7%	6%	9%	5%	7%	6%	14%	9%
<b><i>Fog oils</i></b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	90%	88%	90%	97%	95%	96%	96%	95%	97%	96%	93%
Yes	5%	7%	6%	3%	5%	4%	3%	5%	3%	4%	5%
<b><i>Garbage</i></b>											
Missing	4%	4%	4%	0%	0%	0%	0%	0%	0%	*	2%
No	78%	70%	72%	85%	82%	82%	87%	81%	88%	78%	80%
Yes	18%	26%	24%	15%	18%	18%	13%	19%	12%	22%	18%
<b><i>Human blood/bodily fluids/bodies</i></b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	88%	87%	87%	94%	94%	96%	93%	92%	96%	94%	91%
Yes	7%	8%	9%	5%	6%	4%	7%	7%	3%	6%	7%
<b><i>Industrial pollution</i></b>											
Missing	4%	4%	4%	0%	0%	*	0%	0%	0%	*	2%
No	80%	71%	76%	84%	74%	79%	87%	75%	92%	87%	82%
Yes	16%	25%	20%	16%	26%	21%	13%	25%	8%	13%	16%
<b><i>Insect bites</i></b>											
Missing	4%	4%	4%	0%	0%	0%	0%	0%	0%	*	2%
No	79%	74%	76%	87%	82%	82%	88%	83%	91%	84%	82%
Yes	17%	22%	20%	13%	18%	18%	12%	17%	9%	16%	16%
<b><i>Ionizing radiation</i></b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	94%	92%	94%	99%	99%	98%	99%	98%	98%	96%	96%
Yes	1%	3%	2%	1%	1%	2%	1%	2%	1%	4%	2%
<b><i>JP8/other fuels</i></b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	80%	77%	79%	86%	86%	80%	91%	88%	86%	79%	82%
Yes	16%	18%	17%	14%	14%	20%	9%	12%	14%	21%	15%
<b><i>Lasers</i></b>											

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	90%	91%	89%	97%	98%	97%	97%	98%	96%	91%	93%
Yes	5%	4%	7%	3%	2%	3%	3%	2%	4%	9%	5%
<b>Loud noises</b>											
Missing	4%	4%	4%	0%	0%	0%	0%	0%	0%	*	2%
No	69%	60%	62%	73%	68%	62%	81%	72%	81%	71%	71%
Yes	27%	36%	34%	27%	32%	38%	19%	28%	19%	29%	27%
<b>Paints</b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	88%	86%	89%	96%	95%	95%	96%	93%	96%	94%	91%
Yes	7%	9%	7%	4%	5%	5%	4%	6%	4%	6%	6%
<b>Pesticides</b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	89%	86%	88%	96%	94%	92%	96%	93%	96%	91%	91%
Yes	6%	9%	8%	3%	6%	8%	4%	7%	4%	9%	6%
<b>Radar/microwaves</b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	88%	85%	86%	94%	94%	89%	94%	93%	93%	86%	90%
Yes	7%	10%	10%	6%	6%	11%	5%	7%	7%	14%	7%
<b>Sand/dust</b>											
Missing	4%	3%	3%	0%	0%	0%	0%	0%	0%	*	2%
No	59%	42%	49%	62%	48%	49%	67%	47%	73%	61%	59%
Yes	38%	54%	48%	38%	52%	51%	33%	53%	27%	39%	38%
<b>Smoke: burning trash or feces</b>											
Missing	4%	4%	3%	0%	0%	0%	0%	0%	0%	*	2%
No	67%	52%	59%	58%	47%	46%	72%	58%	79%	68%	65%
Yes	30%	44%	38%	42%	53%	54%	27%	42%	21%	32%	32%
<b>Smoke: oil fire</b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	86%	83%	85%	91%	78%	90%	93%	87%	95%	92%	88%
Yes	10%	12%	11%	8%	22%	10%	7%	13%	5%	8%	9%

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Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b>Solvents</b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	89%	87%	87%	95%	94%	92%	96%	92%	96%	92%	91%
Yes	7%	8%	8%	5%	5%	8%	3%	8%	4%	8%	6%
<b>Smoke: tent heater</b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	93%	91%	92%	98%	98%	97%	98%	97%	99%	98%	95%
Yes	2%	4%	4%	2%	2%	3%	2%	3%	1%	2%	2%
<b>Exhaust fumes</b>											
Missing	4%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	80%	72%	74%	84%	79%	78%	88%	81%	87%	78%	81%
Yes	16%	24%	22%	16%	21%	22%	12%	19%	13%	22%	17%
<b>Other</b>											
Missing	10%	9%	9%	0%	0%	0%	0%	0%	0%	*	6%
No	87%	85%	87%	95%	95%	95%	96%	91%	97%	94%	90%
Yes	3%	6%	4%	5%	5%	5%	4%	9%	3%	6%	3%
<b>17. Exposed to chemical or hazard requiring immediate medical attention</b>											
Missing	1%	1%	1%	0%	0%	0%	6%	4%	5%	3%	2%
No	98%	97%	98%	99%	98%	99%	93%	94%	93%	95%	97%
Yes	1%	1%	1%	1%	1%	1%	1%	2%	1%	2%	1%
<b>18. Enter or closely inspect any destroyed military vehicles</b>											
Missing	1%	1%	1%	0%	0%	0%	6%	4%	5%	3%	2%
No	81%	87%	84%	93%	93%	93%	86%	85%	87%	88%	85%
Yes	18%	12%	15%	7%	7%	6%	8%	11%	8%	8%	13%
<b>19. Think exposed to chemical or biological warfare agents</b>											
Missing	1%	1%	1%	0%	0%	0%	6%	4%	5%	3%	2%
No	85%	77%	81%	90%	79%	83%	83%	74%	84%	77%	84%
Yes	1%	1%	0%	0%	1%	1%	1%	1%	1%	6%	1%
Don't Know	14%	21%	18%	9%	20%	17%	11%	20%	10%	14%	13%
<b>20. Indoor contact with local or 3rd country nationals</b>											
Missing	20%	29%	27%	17%	16%	11%	24%	26%	20%	19%	21%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Minimal	28%	18%	24%	34%	25%	32%	26%	19%	32%	23%	28%
Moderate	30%	29%	28%	34%	38%	41%	32%	33%	31%	34%	31%
Extensive	22%	24%	21%	15%	21%	16%	18%	22%	17%	24%	20%
<b>21. How often used following:</b>											
<b><i>DEET</i></b>											
Missing	3%	5%	4%	7%	6%	6%	8%	6%	6%	4%	4%
Daily	2%	2%	1%	3%	3%	3%	2%	2%	2%	2%	2%
Most days	3%	3%	3%	4%	5%	5%	3%	3%	2%	4%	3%
Some days	25%	21%	19%	22%	25%	24%	21%	25%	18%	27%	23%
Never	53%	55%	56%	52%	52%	53%	50%	49%	55%	51%	53%
Not available	2%	2%	2%	1%	1%	1%	2%	2%	2%	3%	2%
Not required	13%	12%	15%	11%	8%	8%	13%	13%	14%	9%	12%
<b><i>Pesticide-treated uniforms</i></b>											
Missing	3%	5%	4%	7%	6%	5%	8%	5%	6%	3%	5%
Daily	6%	6%	4%	17%	24%	30%	21%	28%	24%	36%	12%
Most days	4%	3%	2%	5%	6%	5%	5%	5%	8%	11%	5%
Some days	13%	8%	6%	10%	11%	9%	10%	10%	14%	15%	12%
Never	57%	59%	63%	49%	44%	43%	41%	37%	36%	27%	52%
Not available	4%	5%	5%	1%	2%	1%	3%	3%	2%	3%	3%
Not required	13%	14%	16%	10%	7%	6%	11%	10%	10%	6%	12%
<b><i>Eye protection</i></b>											
Missing	2%	3%	2%	4%	4%	3%	7%	5%	6%	3%	3%
Daily	61%	47%	58%	33%	34%	33%	42%	38%	50%	59%	53%
Most days	12%	15%	16%	13%	13%	14%	14%	16%	12%	13%	13%
Some days	13%	21%	14%	22%	24%	25%	19%	26%	16%	13%	16%
Never	8%	10%	8%	20%	19%	19%	12%	10%	12%	8%	11%
Not available	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Not required	3%	3%	3%	7%	5%	5%	5%	4%	4%	2%	4%
<b><i>Hearing protection</i></b>											
Missing	2%	3%	2%	3%	2%	1%	7%	5%	6%	4%	3%
Daily	21%	13%	20%	31%	34%	44%	19%	15%	12%	9%	21%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Most days	15%	12%	16%	13%	13%	17%	12%	13%	8%	9%	14%
Some days	46%	52%	41%	29%	30%	26%	37%	47%	35%	48%	41%
Never	12%	14%	15%	16%	15%	9%	18%	13%	30%	25%	16%
Not available	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	0%
Not required	4%	5%	5%	7%	5%	3%	6%	6%	7%	4%	5%
<b><i>N-95 or other respirator (not gas mask)</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	6%	7%	4%	5%
Daily	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Most days	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%
Some days	2%	3%	2%	4%	6%	4%	3%	5%	3%	2%	2%
Never	73%	70%	72%	65%	65%	69%	68%	67%	70%	75%	71%
Not available	4%	4%	4%	2%	2%	2%	3%	4%	2%	5%	3%
Not required	18%	17%	18%	21%	18%	18%	18%	17%	17%	14%	18%
<b><i>Pills to stay awake</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	6%	7%	4%	5%
Daily	1%	0%	1%	0%	0%	0%	1%	1%	1%	1%	1%
Most days	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	1%
Some days	6%	4%	6%	3%	2%	3%	3%	3%	6%	7%	5%
Never	73%	73%	72%	71%	76%	74%	71%	74%	69%	73%	72%
Not available	2%	2%	2%	1%	1%	1%	1%	1%	2%	3%	2%
Not required	14%	14%	14%	17%	14%	14%	15%	14%	15%	10%	15%
<b><i>Anti-NBC meds</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	6%	7%	4%	5%
Daily	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Some days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Never	77%	76%	77%	72%	76%	76%	72%	76%	74%	80%	76%
Not available	2%	2%	2%	1%	1%	1%	1%	2%	1%	3%	2%
Not required	17%	16%	17%	19%	16%	16%	17%	16%	17%	13%	17%
<b><i>Pyridostigmine (nerve agent pill)</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	6%	7%	4%	5%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Daily	0%	0%	0%	0%	*	0%	0%	*	0%	0%	0%
Most days	0%	0%	0%	*	*	*	0%	0%	0%	*	0%
Some days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Never	77%	76%	77%	72%	76%	76%	73%	76%	74%	80%	76%
Not available	2%	2%	2%	1%	1%	1%	2%	2%	1%	3%	2%
Not required	18%	16%	17%	19%	16%	16%	17%	16%	17%	13%	17%
<b><i>Nerve agent antidote injector</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	6%	7%	4%	5%
Daily	0%	0%	0%	0%	*	0%	0%	*	0%	0%	0%
Most days	0%	0%	0%	*	*	*	0%	0%	0%	*	0%
Some days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Never	77%	77%	78%	73%	77%	77%	73%	77%	74%	80%	76%
Not available	2%	2%	2%	1%	1%	0%	1%	1%	1%	3%	2%
Not required	18%	16%	17%	19%	15%	16%	17%	16%	17%	13%	17%
<b><i>Seizure/convulsion antidote injector</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	6%	7%	4%	5%
Daily	0%	0%	0%	0%	*	0%	0%	*	0%	0%	0%
Most days	0%	0%	0%	*	*	*	0%	0%	0%	*	0%
Some days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Never	77%	77%	78%	73%	77%	77%	73%	76%	74%	80%	76%
Not available	2%	2%	2%	1%	1%	1%	1%	1%	1%	3%	2%
Not required	17%	16%	16%	19%	15%	16%	17%	16%	17%	13%	17%
<b><i>NBC gas mask</i></b>											
Missing	3%	5%	4%	8%	7%	7%	8%	5%	7%	4%	5%
Daily	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Some days	1%	3%	3%	1%	2%	1%	2%	4%	2%	4%	2%
Never	79%	77%	78%	74%	78%	78%	73%	75%	75%	80%	77%
Not available	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
Not required	16%	14%	14%	17%	13%	14%	15%	14%	15%	10%	15%
<b><i>MOPP over garments</i></b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	3%	6%	4%	8%	7%	7%	8%	6%	7%	4%	5%
Daily	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Most days	0%	0%	0%	0%	*	0%	0%	0%	0%	*	0%
Some days	0%	1%	1%	0%	0%	1%	1%	2%	1%	1%	1%
Never	79%	78%	80%	75%	79%	78%	74%	77%	75%	81%	78%
Not available	1%	1%	1%	0%	0%	0%	1%	1%	1%	3%	1%
Not required	16%	14%	15%	17%	14%	14%	16%	14%	16%	11%	16%
<b>22. Received any of following vaccinations:</b>											
<b><i>Smallpox</i></b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	57%	47%	40%	63%	55%	67%	55%	40%	59%	50%	56%
Checked	43%	53%	60%	37%	44%	32%	45%	60%	41%	50%	44%
<b><i>Anthrax</i></b>											
Missing	*	*	*	0%	*	*	*	*	*	*	0%
Not checked	12%	11%	8%	15%	12%	16%	19%	14%	24%	20%	14%
Checked	88%	89%	92%	85%	88%	84%	81%	86%	76%	80%	86%
<b><i>Botulism</i></b>											
Missing	*	*	*	*	*	0%	*	*	*	*	0%
Not checked	98%	97%	97%	99%	100%	100%	98%	97%	98%	98%	98%
Checked	2%	3%	3%	1%	0%	0%	2%	3%	2%	2%	2%
<b><i>Typhoid</i></b>											
Not checked	55%	56%	57%	56%	59%	61%	58%	54%	69%	57%	58%
Checked	45%	44%	43%	44%	41%	39%	42%	46%	31%	43%	42%
<b><i>Meningococcal</i></b>											
Not checked	93%	90%	90%	97%	93%	96%	85%	80%	93%	88%	93%
Checked	7%	10%	10%	3%	7%	4%	15%	20%	7%	12%	7%
<b><i>Yellow fever</i></b>											
Not checked	90%	81%	86%	94%	89%	92%	75%	64%	86%	80%	88%
Checked	10%	19%	14%	6%	11%	8%	25%	36%	14%	20%	12%
<b><i>Other</i></b>											
Not checked	89%	86%	85%	89%	84%	80%	87%	89%	89%	89%	88%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Checked	11%	14%	15%	11%	16%	20%	13%	11%	11%	11%	12%
<b>None</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	98%	99%	99%	97%	98%	96%	97%	99%	97%	99%	98%
Checked	2%	1%	1%	2%	2%	4%	3%	1%	3%	1%	2%
<b>Don't know</b>											
Missing	*	*	*	0%	*	*	*	*	*	*	0%
Not checked	82%	83%	82%	89%	92%	92%	93%	94%	88%	86%	85%
Checked	18%	17%	18%	11%	8%	8%	7%	6%	12%	14%	15%
<b>23. Told to take medicines to prevent malaria</b>											
Missing	1%	1%	1%	4%	5%	4%	6%	4%	6%	4%	2%
No	83%	79%	73%	68%	64%	61%	67%	77%	82%	95%	79%
Yes	16%	20%	26%	27%	32%	35%	27%	19%	13%	1%	19%
<b>Took any of the following anti-malarial medicines:</b>											
<b>Chloroquine (Aralen®)</b>											
Missing	85%	85%	87%	100%	99%	100%	100%	100%	100%	100%	91%
No	15%	14%	12%	0%	0%	0%	0%	*	*	0%	9%
Yes	0%	1%	0%	0%	1%	0%	*	*	*	*	0%
<b>Doxycycline (Vibramycin®)</b>											
Missing	79%	75%	70%	92%	91%	87%	100%	100%	100%	100%	84%
No	13%	13%	11%	2%	3%	3%	0%	0%	0%	0%	8%
Yes	8%	12%	19%	6%	6%	10%	0%	*	0%	*	7%
<b>Mefloquine (Lariam®)</b>											
Missing	81%	83%	86%	91%	91%	91%	100%	100%	100%	100%	87%
No	14%	14%	12%	2%	2%	2%	0%	*	0%	0%	9%
Yes	6%	4%	2%	7%	7%	7%	*	*	*	*	4%
<b>Primaquine</b>											
Missing	85%	85%	85%	97%	99%	99%	100%	100%	100%	100%	90%
No	14%	14%	11%	1%	0%	0%	0%	*	*	0%	9%
Yes	1%	1%	4%	2%	1%	1%	0%	0%	*	*	1%
<b>Other</b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>91803</b>	<b>7472</b>	<b>18822</b>	<b>23889</b>	<b>3104</b>	<b>4974</b>	<b>8297</b>	<b>2104</b>	<b>28253</b>	<b>3483</b>	<b>192201</b>
Missing	87%	87%	89%	100%	99%	99%	100%	100%	100%	100%	92%
No	13%	12%	11%	0%	0%	0%	0%	*	*	0%	8%
Yes	0%	0%	0%	0%	0%	0%	*	*	*	*	0%
<b>24-27. Any requests for support- created index*</b>											
Missing	0%	0%	0%	0%	0%	0%	4%	2%	4%	2%	1%
No	74%	65%	70%	90%	80%	91%	79%	63%	84%	70%	77%
Yes	26%	35%	30%	9%	20%	9%	17%	35%	13%	28%	22%
<b>24-27. Requests for support- created index*</b>											
N	91403	7443	18754	23789	3096	4953	7977	2055	27160	3413	190043
Mean	0.37	0.51	0.44	0.11	0.24	0.11	0.24	0.48	0.17	0.35	0.31
Standard deviation	0.74	0.85	0.81	0.38	0.53	0.38	0.61	0.77	0.49	0.63	0.68
Median	0	0	0	0	0	0	0	0	0	0	0
Range	4	4	4	4	4	4	4	4	4	4	4
<b>24. Request healthcare visit</b>											
Missing	1%	1%	0%	0%	0%	0%	4%	3%	4%	2%	1%
No	77%	68%	74%	91%	81%	91%	81%	66%	85%	72%	80%
Yes	22%	31%	25%	9%	19%	8%	15%	31%	11%	26%	19%
<b>25. Request information on or assistance for stress, emotional or alcohol concern</b>											
Missing	1%	1%	0%	0%	0%	0%	4%	3%	4%	2%	1%
No	92%	89%	90%	98%	98%	99%	91%	89%	93%	93%	93%
Yes	8%	10%	10%	1%	2%	1%	4%	8%	3%	4%	6%
<b>26. Request help for family or relationship concern</b>											
Missing	1%	1%	1%	0%	0%	0%	4%	3%	4%	2%	1%
No	94%	93%	93%	99%	98%	99%	93%	92%	94%	95%	95%
Yes	5%	7%	6%	1%	2%	1%	3%	5%	2%	3%	4%
<b>27. Request to see chaplain or community support counselor</b>											
Missing	1%	1%	1%	0%	0%	0%	4%	3%	4%	2%	1%
No	97%	96%	97%	99%	99%	99%	95%	95%	95%	97%	97%
Yes	2%	3%	2%	0%	1%	0%	1%	2%	1%	1%	2%

\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.

\*\*Note: Asterisks indicate that there were no SMs endorsing the response.

**Table N.2 January 2008 DD Form 2796 Items – Descriptive Statistics by Service Branch/Component- OIF/OEF**

Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b>1. Medical or dental problems</b>											
Missing	4%	5%	3%	0%	0%	0%	0%	1%	0%	*	2%
No	64%	47%	49%	81%	73%	78%	75%	50%	80%	60%	67%
Yes	33%	48%	48%	19%	27%	22%	24%	49%	20%	40%	31%
<b>1. Still bothered by medical or dental problems</b>											
Missing	67%	52%	53%	70%	61%	68%	76%	51%	80%	60%	68%
No	8%	10%	11%	18%	19%	18%	7%	11%	6%	7%	10%
Yes	24%	38%	36%	12%	20%	14%	18%	38%	14%	33%	23%
<b>2. Currently on profile or light duty</b>											
Missing	4%	5%	3%	0%	0%	0%	0%	1%	0%	*	3%
No	85%	80%	85%	98%	97%	99%	98%	96%	98%	98%	90%
Yes	11%	15%	12%	2%	3%	1%	2%	3%	2%	2%	8%
<b>2. Condition due to injury or illness during deployment</b>											
Missing	66%	58%	73%	3%	2%	2%	15%	12%	17%	18%	45%
No	8%	9%	6%	2%	2%	1%	0%	0%	0%	0%	5%
Yes	6%	11%	9%	1%	2%	2%	1%	3%	1%	2%	5%
NA	21%	22%	13%	93%	93%	96%	83%	85%	81%	80%	45%
<b>2. Similar problems prior to deployment</b>											
Missing	66%	58%	73%	3%	2%	2%	15%	12%	17%	18%	45%
No	5%	10%	8%	2%	2%	2%	1%	3%	1%	2%	4%
Yes	8%	9%	6%	1%	1%	0%	0%	1%	0%	1%	5%
NA	21%	23%	13%	94%	94%	96%	83%	85%	81%	80%	46%
<b>2. Condition worsen during deployment</b>											
Missing	66%	58%	74%	3%	2%	2%	15%	12%	17%	18%	45%
No	5%	6%	4%	2%	1%	1%	0%	1%	0%	0%	3%
Yes	6%	8%	6%	1%	1%	0%	0%	1%	0%	1%	4%
NA	24%	29%	17%	94%	96%	97%	84%	87%	82%	81%	48%
<b>3a. Thoughts of harming self (past month)</b>											
Missing	4%	6%	4%	0%	0%	0%	1%	1%	0%	*	3%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
No	95%	94%	96%	99%	100%	100%	99%	99%	100%	100%	97%
Yes	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>3a. How often bothered by thoughts of harming self</b>											
Missing	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%
A few days	0%	0%	0%	0%	0%	0%	*	*	*	*	0%
More than half of the time	0%	0%	0%	0%	*	0%	0%	*	0%	*	0%
Nearly every day	0%	0%	0%	0%	*	0%	*	0%	0%	*	0%
<b>3b. Thoughts of hurting/losing control with someone</b>											
Missing	6%	8%	6%	0%	0%	0%	1%	1%	0%	*	4%
No	92%	91%	92%	99%	99%	100%	98%	98%	99%	99%	94%
Yes	2%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
Unsure	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>4a. Provider determined risk to self or others</b>											
Missing	81%	78%	82%	78%	73%	80%	96%	96%	98%	99%	84%
No	18%	22%	18%	22%	26%	20%	4%	4%	1%	1%	15%
Yes	0%	0%	0%	0%	*	0%	0%	*	0%	*	0%
Unsure	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>4b. Outcome of risk assessment</b>											
Missing	88%	91%	93%	87%	82%	91%	98%	98%	99%	99%	91%
Immediate referral	1%	0%	0%	0%	0%	0%	*	*	*	*	0%
Routine follow-up referral	1%	1%	1%	0%	0%	0%	1%	1%	1%	0%	1%
Referral not indicated	10%	8%	5%	13%	18%	9%	1%	1%	1%	1%	8%
<b>5. Alcohol screening result</b>											
Missing	1%	3%	1%	0%	0%	0%	76%	79%	70%	65%	16%
No evidence	81%	85%	82%	90%	91%	87%	3%	3%	0%	0%	65%
Evidence	19%	13%	17%	10%	9%	13%	21%	18%	29%	35%	19%
<b>5. Alcohol PCM referral indicated</b>											
Missing	1%	3%	1%	0%	0%	0%	76%	79%	70%	65%	16%
No	87%	87%	86%	98%	99%	99%	21%	20%	25%	29%	75%
Yes	13%	10%	14%	1%	1%	1%	3%	1%	5%	7%	9%
<b>6. Sought/seeking counseling for mental health</b>											
Missing	8%	10%	8%	1%	0%	0%	1%	1%	0%	*	5%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
No	82%	82%	82%	98%	99%	99%	95%	93%	97%	97%	89%
Yes	11%	10%	12%	2%	1%	1%	5%	8%	3%	3%	8%
<b>7. TBI risk assessment</b>											
Missing	5%	9%	5%	0%	0%	0%	80%	72%	83%	86%	21%
No evidence	88%	85%	89%	99%	99%	99%	3%	3%	0%	0%	71%
Evidence	7%	5%	6%	1%	1%	0%	17%	25%	17%	14%	8%
<b>7. TBI referral indicated</b>											
Missing	5%	9%	5%	0%	0%	0%	80%	72%	83%	86%	21%
No	91%	89%	92%	99%	99%	100%	5%	5%	1%	0%	73%
Yes	4%	2%	3%	0%	0%	0%	16%	23%	17%	14%	6%
<b>8. Clinician assessment of tuberculosis risk</b>											
Missing	1%	5%	3%	0%	0%	0%	78%	72%	84%	83%	19%
No evidence	59%	51%	52%	69%	68%	78%	2%	2%	0%	0%	47%
Evidence	40%	44%	45%	30%	32%	22%	20%	26%	16%	16%	34%
<b>8. Clinician TB PCM Referral</b>											
Missing	1%	5%	3%	0%	0%	0%	78%	72%	84%	83%	19%
No	59%	52%	52%	70%	69%	79%	20%	26%	14%	15%	51%
Yes	40%	44%	45%	29%	31%	20%	2%	2%	2%	1%	30%
<b>9. Clinician assessment of depleted uranium risk</b>											
Missing	1%	3%	1%	0%	0%	0%	89%	86%	92%	92%	21%
No evidence	89%	89%	89%	99%	99%	99%	3%	3%	0%	0%	72%
Evidence	10%	8%	10%	1%	1%	1%	8%	11%	8%	8%	8%
<b>9. Clinician depleted uranium referral</b>											
Missing	1%	3%	1%	0%	0%	0%	89%	86%	92%	92%	21%
No	91%	90%	90%	99%	99%	100%	9%	12%	7%	7%	74%
Yes	9%	7%	9%	1%	1%	0%	1%	2%	1%	1%	6%
<b>10. Concerns about exposures</b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%
No	78%	64%	71%	84%	74%	80%	79%	65%	86%	80%	79%
Yes	18%	31%	25%	15%	26%	19%	20%	35%	14%	20%	19%
<b>11. Concerns about your health</b>											
Missing	5%	5%	4%	0%	0%	0%	0%	0%	0%	*	3%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
No	72%	61%	64%	93%	86%	93%	82%	71%	86%	73%	76%
Yes	23%	34%	32%	7%	14%	7%	18%	29%	14%	27%	21%
<b>11. Any clinician major concern- created index*</b>											
No	90%	86%	89%	98%	96%	98%	93%	90%	95%	92%	92%
Yes	10%	14%	11%	2%	4%	2%	7%	10%	5%	8%	8%
<b>11. Number of major concerns- created index*</b>											
N	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Mean	0.13	0.18	0.14	0.03	0.05	0.02	0.09	0.13	0.06	0.09	0.1
Standard deviation	0.45	0.54	0.46	0.22	0.26	0.22	0.39	0.43	0.32	0.35	0.41
Median	0	0	0	0	0	0	0	0	0	0	0
Range	9	7	7	9	5	7	7	4	9	7	9
<b>11. Physical symptoms</b>											
<i>Clinician concern</i>											
No concern	75%	63%	65%	91%	82%	89%	96%	92%	97%	94%	81%
Minor concern	18%	25%	26%	8%	16%	9%	0%	1%	0%	0%	13%
Major concern	7%	11%	9%	1%	2%	1%	4%	7%	3%	6%	6%
<i>SM already under care</i>											
Missing	75%	64%	66%	93%	87%	94%	78%	63%	82%	67%	78%
No	12%	16%	17%	3%	5%	2%	12%	19%	9%	24%	11%
Yes	12%	20%	17%	4%	8%	4%	10%	18%	9%	9%	11%
<b>11. Exposure symptoms</b>											
<i>Clinician concern</i>											
No concern	91%	87%	91%	95%	92%	95%	99%	98%	100%	100%	93%
Minor concern	8%	12%	9%	5%	7%	5%	0%	0%	0%	*	6%
Major concern	1%	1%	1%	0%	0%	0%	1%	2%	0%	0%	1%
<i>SM already under care</i>											
Missing	91%	88%	91%	98%	97%	98%	91%	87%	93%	91%	92%
No	8%	11%	8%	2%	3%	2%	8%	11%	6%	9%	7%
Yes	1%	1%	1%	0%	0%	0%	1%	1%	2%	0%	1%
<b>11. Environmental symptoms</b>											
<i>Clinician concern</i>											
No concern	96%	92%	95%	92%	88%	82%	99%	99%	100%	100%	96%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Minor concern	3%	8%	4%	7%	12%	18%	0%	0%	0%	*	4%
Major concern	0%	1%	0%	0%	1%	0%	0%	1%	0%	0%	0%
<i>SM already under care</i>											
Missing	96%	92%	95%	97%	95%	95%	93%	90%	95%	92%	96%
No	3%	8%	4%	3%	5%	5%	5%	9%	4%	8%	4%
Yes	0%	0%	0%	0%	0%	0%	2%	1%	1%	0%	0%
<b>11. Occupational symptoms</b>											
<i>Clinician concern</i>											
No concern	98%	98%	99%	95%	95%	96%	99%	100%	100%	100%	98%
Minor concern	1%	2%	1%	4%	3%	4%	0%	*	0%	*	2%
Major concern	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%
<i>SM already under care</i>											
Missing	98%	98%	99%	98%	98%	99%	97%	98%	97%	98%	98%
No	2%	2%	1%	2%	2%	1%	2%	2%	1%	2%	2%
Yes	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%	0%
<b>11. Combat/mission-related symptoms</b>											
<i>Clinician concern</i>											
No concern	93%	92%	95%	99%	99%	99%	100%	100%	100%	100%	96%
Minor concern	6%	7%	4%	1%	1%	1%	0%	*	0%	*	4%
Major concern	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<i>SM already under care</i>											
Missing	93%	93%	95%	99%	100%	100%	98%	99%	99%	99%	96%
No	5%	6%	4%	1%	0%	0%	2%	1%	1%	1%	3%
Yes	1%	1%	1%	0%	0%	0%	0%	0%	1%	0%	1%
<b>11. Depression symptoms</b>											
<i>Clinician concern</i>											
No concern	93%	93%	94%	99%	100%	100%	99%	99%	99%	99%	95%
Minor concern	6%	6%	5%	1%	0%	0%	0%	*	*	*	4%
Major concern	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
<i>SM already under care</i>											
Missing	93%	94%	94%	100%	100%	100%	96%	97%	98%	98%	95%
No	5%	4%	4%	0%	0%	0%	3%	2%	1%	2%	4%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Yes	2%	2%	2%	0%	0%	0%	1%	1%	1%	0%	1%
<b>11. PTSD symptoms</b>											
<i>Clinician concern</i>											
No concern	94%	94%	94%	99%	100%	100%	99%	99%	100%	100%	96%
Minor concern	5%	5%	4%	0%	0%	0%	0%	*	*	*	3%
Major concern	1%	1%	1%	0%	0%	0%	1%	1%	0%	0%	1%
<i>SM already under care</i>											
Missing	94%	95%	95%	100%	100%	100%	97%	98%	99%	99%	96%
No	5%	4%	4%	0%	0%	0%	2%	2%	1%	1%	3%
Yes	1%	1%	1%	0%	0%	*	1%	1%	0%	0%	1%
<b>11. Anger/aggression symptoms</b>											
<i>Clinician concern</i>											
No concern	98%	98%	98%	100%	100%	100%	100%	100%	100%	100%	99%
Minor concern	1%	1%	2%	0%	0%	0%	0%	*	0%	*	1%
Major concern	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<i>SM already under care</i>											
Missing	98%	98%	98%	100%	100%	100%	98%	98%	99%	99%	98%
No	2%	1%	1%	0%	0%	0%	2%	1%	1%	1%	1%
Yes	1%	1%	1%	0%	*	*	0%	0%	0%	0%	1%
<b>11. Suicidal ideation</b>											
<i>Clinician concern</i>											
No concern	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Minor concern	0%	0%	0%	0%	0%	0%	*	*	*	*	0%
Major concern	0%	0%	0%	0%	*	*	0%	*	0%	0%	0%
<i>SM already under care</i>											
Missing	99%	100%	100%	100%	100%	100%	99%	99%	100%	100%	100%
No	1%	0%	0%	0%	*	*	1%	1%	0%	0%	0%
Yes	0%	0%	0%	0%	*	0%	*	0%	0%	0%	0%
<b>11. Social/family conflict</b>											
<i>Clinician concern</i>											
No concern	99%	99%	99%	100%	100%	100%	100%	100%	100%	100%	99%
Minor concern	1%	1%	1%	0%	0%	0%	0%	*	*	*	1%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Major concern	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<i>SM already under care</i>											
Missing	99%	99%	99%	100%	100%	100%	97%	97%	99%	99%	99%
No	1%	1%	1%	0%	0%	0%	3%	3%	1%	1%	1%
Yes	0%	0%	0%	0%	0%	*	0%	0%	0%	0%	0%
<b>11. Alcohol use</b>											
<i>Clinician concern</i>											
No concern	98%	99%	99%	99%	99%	100%	99%	100%	99%	99%	99%
Minor concern	1%	1%	1%	0%	1%	0%	0%	*	0%	*	1%
Major concern	0%	0%	0%	0%	0%	*	1%	0%	1%	1%	0%
<i>SM already under care</i>											
Missing	98%	99%	99%	100%	100%	100%	97%	98%	96%	96%	98%
No	2%	1%	1%	0%	0%	0%	3%	2%	4%	4%	2%
Yes	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
<b>11. Other</b>											
<i>Clinician concern</i>											
No concern	98%	98%	98%	100%	100%	100%	100%	99%	100%	100%	99%
Minor concern	1%	1%	1%	0%	0%	0%	0%	0%	0%	*	1%
Major concern	0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%
<i>SM already under care</i>											
Missing	98%	98%	98%	100%	100%	100%	98%	98%	98%	99%	99%
No	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
Yes	1%	1%	1%	0%	0%	0%	1%	1%	0%	0%	0%
<b>12. Number of referrals- created index*</b>											
N	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Mean	0.51	0.65	0.71	0.18	0.28	0.15	0.44	0.5	0.33	0.61	0.45
Standard deviation	0.8	0.96	1	0.47	0.55	0.42	0.77	0.79	0.7	0.85	0.79
Median	0	0	0	0	0	0	0	0	0	0	0
Range	9	10	9	8	7	6	8	5	8	7	10
<b>12. Any referral- created index*</b>											
No	64%	58%	55%	85%	76%	87%	68%	64%	76%	57%	68%
Yes	36%	42%	45%	15%	24%	13%	32%	36%	24%	43%	32%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b>12. Received medical referral (a-d)- created index*</b>											
No	69%	63%	61%	87%	78%	89%	73%	70%	81%	64%	73%
Yes	31%	37%	39%	13%	22%	11%	27%	30%	19%	36%	27%
<b>12. Primary care (a)- created index*</b>											
No	82%	73%	69%	90%	82%	92%	80%	81%	88%	84%	82%
Yes	18%	27%	31%	10%	18%	8%	20%	19%	12%	16%	18%
<b>12. Behavioral care (b,c)- created index*</b>											
No	92%	94%	93%	99%	99%	100%	95%	96%	97%	97%	94%
Yes	8%	6%	7%	1%	1%	0%	5%	4%	3%	3%	6%
<b>12. Specialty physical care (d)- created index*</b>											
No	88%	85%	86%	97%	94%	96%	91%	86%	92%	76%	90%
Yes	12%	15%	14%	3%	6%	4%	9%	14%	8%	24%	10%
<b>12. Military OneSource (j)- created index*</b>											
No	99%	99%	98%	100%	100%	100%	100%	99%	99%	100%	99%
Yes	1%	1%	2%	0%	0%	0%	0%	1%	1%	0%	1%
<b>12. Other non-medical referral (e-k, except j)- created index*</b>											
No	92%	93%	92%	99%	99%	99%	94%	92%	94%	94%	94%
Yes	8%	7%	8%	1%	1%	1%	6%	8%	6%	6%	6%
<b>12. Referral indicated</b>											
<i>Primary care</i>											
Within 24 hours	0%	1%	1%	0%	1%	0%	0%	*	*	0%	0%
Within 7 days	3%	3%	3%	2%	2%	2%	3%	3%	2%	1%	3%
Within 30 days	14%	23%	27%	8%	15%	6%	17%	16%	11%	14%	14%
No Referral	82%	73%	69%	90%	82%	92%	80%	81%	88%	84%	82%
<i>Behavioral health primary care</i>											
Within 24 hours	1%	1%	1%	0%	0%	0%	*	*	*	*	1%
Within 7 days	1%	1%	1%	0%	0%	0%	0%	1%	0%	0%	1%
Within 30 days	2%	2%	2%	0%	0%	0%	1%	1%	1%	0%	1%
No Referral	96%	97%	96%	100%	99%	100%	98%	98%	99%	99%	97%
<i>Mental health specialty care</i>											
Within 24 hours	1%	0%	0%	0%	0%	0%	*	0%	*	*	0%
Within 7 days	1%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Within 30 days	3%	2%	2%	1%	1%	0%	3%	2%	1%	2%	2%
No Referral	95%	97%	96%	99%	99%	100%	96%	97%	98%	98%	97%
<b>Audiology</b>											
Within 24 hours	0%	0%	0%	0%	0%	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	1%	0%	1%	0%
Within 30 days	2%	2%	3%	0%	0%	0%	2%	2%	2%	9%	2%
No Referral	98%	98%	96%	99%	99%	99%	98%	97%	97%	90%	98%
<b>Cardiology</b>											
Within 24 hours	0%	*	0%	0%	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Dental</b>											
Within 24 hours	0%	0%	0%	0%	0%	0%	*	*	*	*	0%
Within 7 days	1%	1%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Within 30 days	2%	2%	2%	1%	1%	0%	1%	3%	1%	4%	2%
No Referral	97%	97%	97%	99%	98%	99%	98%	97%	98%	94%	98%
<b>Dermatology</b>											
Within 24 hours	0%	0%	*	*	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	2%	1%	0%	1%	0%	1%	1%	1%	1%	1%
No Referral	99%	98%	99%	100%	99%	100%	99%	99%	99%	98%	99%
<b>ENT</b>											
Within 24 hours	0%	*	0%	*	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	*	0%	0%	0%	0%
Within 30 days	0%	1%	1%	0%	0%	0%	0%	0%	0%	1%	0%
No Referral	100%	99%	99%	100%	100%	100%	100%	100%	100%	99%	100%
<b>GI</b>											
Within 24 hours	0%	0%	0%	*	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
<b>Internal medicine</b>											
Within 24 hours	0%	0%	0%	*	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	0%	*	0%	0%	0%	0%
Within 30 days	0%	0%	0%	*	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%	100%
<b>Neurology</b>											
Within 24 hours	0%	0%	0%	0%	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	1%	1%	0%	0%	*	0%	0%	0%	0%	1%
No Referral	99%	99%	99%	100%	100%	100%	100%	99%	100%	99%	99%
<b>OB/GYN</b>											
Within 24 hours	0%	0%	*	0%	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	*	0%
Within 30 days	0%	1%	0%	0%	*	*	0%	0%	0%	0%	0%
No Referral	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Ophthalmology</b>											
Within 24 hours	0%	0%	0%	*	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	*	0%	0%	0%	*	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Optometry</b>											
Within 24 hours	0%	0%	0%	0%	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	0%
No Referral	99%	100%	100%	100%	100%	100%	99%	99%	99%	99%	100%
<b>Orthopedics</b>											
Within 24 hours	0%	0%	0%	0%	0%	0%	0%	*	*	*	0%
Within 7 days	1%	1%	1%	0%	1%	0%	0%	1%	0%	1%	1%
Within 30 days	3%	6%	6%	0%	1%	1%	2%	4%	2%	7%	3%
No Referral	96%	93%	93%	99%	98%	99%	97%	94%	98%	92%	96%
<b>Pulmonology</b>											
Within 24 hours	0%	0%	0%	0%	*	*	*	*	*	*	0%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Within 7 days	0%	0%	0%	0%	0%	*	*	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Urology</i></b>											
Within 24 hours	0%	*	0%	0%	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%
<b><i>Case manager</i></b>											
Within 24 hours	0%	0%	0%	0%	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	*	0%	0%	0%	*	0%
Within 30 days	0%	0%	0%	0%	*	*	0%	0%	0%	0%	0%
No Referral	100%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Substance abuse program</i></b>											
Within 24 hours	0%	0%	0%	*	0%	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	*	0%	*	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	1%	0%	1%	1%	0%
No Referral	100%	100%	100%	100%	100%	100%	99%	100%	99%	98%	99%
<b><i>Health education</i></b>											
Within 24 hours	0%	*	0%	*	0%	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Chaplain</i></b>											
Within 24 hours	0%	0%	0%	*	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	*	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	99%	100%	100%	100%	100%
<b><i>Family support, community service</i></b>											
Within 24 hours	0%	0%	*	0%	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	1%	1%	0%	0%	0%	1%	1%	1%	0%	0%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
No Referral	99%	99%	99%	100%	100%	100%	99%	99%	99%	100%	99%
<b><i>Military OneSource</i></b>											
Within 24 hours	0%	*	0%	0%	0%	0%	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Within 30 days	1%	1%	2%	0%	0%	0%	0%	1%	0%	0%	1%
No Referral	99%	99%	98%	100%	100%	100%	100%	99%	99%	100%	99%
<b><i>Other</i></b>											
Within 24 hours	1%	1%	2%	0%	0%	0%	*	0%	*	*	1%
Within 7 days	1%	2%	1%	0%	0%	0%	0%	1%	0%	1%	1%
Within 30 days	4%	3%	3%	1%	1%	1%	2%	5%	3%	3%	3%
No Referral	93%	94%	94%	99%	99%	99%	97%	94%	97%	96%	95%
<b>14. SM was provided with:</b>											
<b><i>Medical threat debrief</i></b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	28%	48%	38%	57%	65%	50%	48%	45%	47%	78%	39%
Checked	72%	52%	62%	43%	35%	50%	52%	55%	53%	22%	61%
<b><i>Health education information</i></b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	40%	43%	40%	67%	76%	57%	37%	33%	28%	51%	43%
Checked	60%	57%	60%	33%	23%	43%	63%	67%	72%	49%	57%
<b><i>Health care benefits information</i></b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	67%	62%	54%	90%	89%	90%	79%	51%	80%	79%	72%
Checked	33%	38%	46%	10%	11%	10%	21%	49%	20%	21%	28%
<b><i>Appointment assistance</i></b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	92%	96%	95%	100%	100%	100%	89%	94%	94%	95%	94%
Checked	8%	4%	5%	0%	*	0%	11%	6%	6%	5%	6%
<b><i>Member declined to complete form</i></b>											
Not checked	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	0%	0%	0%	0%	0%	*	0%	0%	0%
<b><i>Member declined interview</i></b>											

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	100%	100%	100%	100%	100%	100%	99%	100%	100%	100%	100%
Checked	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
<b>Member declined referral</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	99%	97%	96%	99%	98%	99%	98%	99%	98%	95%	98%
Checked	1%	3%	4%	1%	2%	1%	2%	1%	2%	5%	2%
<b>LOD</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	100%	96%	94%	100%	99%	99%	100%	95%	100%	100%	99%
Checked	0%	4%	6%	0%	1%	1%	0%	5%	0%	0%	1%
<b>Other</b>											
Not checked	99%	98%	99%	100%	99%	97%	95%	96%	93%	67%	97%
Checked	1%	2%	1%	0%	1%	3%	5%	4%	7%	33%	3%
<b>15. Referral made to following</b>											
<b>Military treatment facility</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	70%	78%	81%	94%	93%	96%	80%	81%	88%	77%	79%
Checked	30%	22%	19%	5%	7%	4%	20%	19%	12%	23%	21%
<b>Division/Line-based medical resource</b>											
Missing	*	*	*	0%	*	0%	*	*	*	*	0%
Not checked	97%	99%	100%	100%	100%	100%	99%	99%	97%	100%	98%
Checked	3%	1%	0%	0%	0%	0%	1%	1%	3%	0%	2%
<b>VA</b>											
Missing	*	*	*	*	*	0%	*	*	*	*	0%
Not checked	100%	80%	77%	100%	100%	99%	100%	91%	100%	98%	97%
Checked	0%	20%	23%	0%	0%	1%	0%	9%	0%	2%	3%
<b>Vet center</b>											
Not checked	100%	94%	94%	100%	100%	100%	100%	100%	100%	99%	99%
Checked	0%	6%	6%	0%	*	0%	*	0%	0%	1%	1%
<b>TRICARE</b>											
Not checked	99%	81%	78%	100%	99%	99%	99%	94%	99%	100%	97%

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Questions in clinician portion of DD 2796	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	91803	7472	18822	23889	3104	4974	8297	2104	28253	3483	192201
Checked	1%	19%	22%	0%	1%	1%	1%	6%	1%	0%	3%
<b>Contract support</b>											
Not checked	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	0%	*	*	*	0%	*	0%	*	0%
<b>Community service</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	0%	0%	*	*	0%	0%	0%	0%	0%	0%
<b>Other</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	99%	98%	98%	99%	100%	98%	97%	95%	98%	98%	99%
Checked	1%	2%	2%	1%	0%	1%	3%	5%	2%	2%	1%
<b>None</b>											
Missing	*	*	*	0%	0%	0%	*	*	*	*	0%
Not checked	36%	47%	45%	7%	9%	6%	23%	30%	17%	27%	29%
Checked	64%	53%	55%	93%	91%	94%	77%	70%	83%	73%	71%

\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.

\*\*Note: Asterisks indicate that there were no SMs endorsing the response.

**Table N.3 January 2008 DD Form 2900 Items – Descriptive Statistics by Service Branch/Component- OIF/OEF**

Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
<b>Gender</b>											
Missing	*	0%	*	*	*	0%	*	*	*	*	0%
Male	91%	85%	93%	84%	84%	90%	91%	89%	96%	98%	91%
Female	9%	15%	7%	16%	16%	10%	9%	11%	4%	2%	9%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
<b>Age</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	28.93	33.84	32.63	30.07	38.26	36.23	31.82	37.39	26.37	27	30.14
Standard Deviation	6.75	9.57	9.1	7.08	9.22	9.28	7.46	8.59	6	6.48	7.99
Median	27	31	30	28	39	36	31	38	24	25	28
Range	47	48	48	42	42	43	43	42	38	40	49
<b>Race</b>											
Missing	2%	1%	2%	3%	1%	1%	1%	4%	3%	5%	2%
Asian/Pacific Islander	4%	4%	2%	4%	6%	2%	8%	5%	4%	3%	4%
Black	18%	18%	11%	13%	10%	4%	13%	10%	9%	6%	14%
Hispanic	11%	11%	7%	6%	7%	5%	13%	9%	13%	14%	10%
American Indian/Alaskan Native	1%	1%	1%	1%	1%	2%	4%	3%	1%	1%	1%
Other	*	*	*	1%	1%	0%	1%	2%	1%	1%	0%
White	65%	65%	77%	72%	75%	85%	61%	68%	69%	70%	69%
<b>Education Level</b>											
Bachelor's degree	12%	17%	12%	12%	17%	16%	16%	18%	8%	9%	12%
High school	73%	59%	68%	66%	60%	2%	69%	57%	87%	84%	70%
Master's degree	3%	6%	2%	7%	7%	3%	3%	7%	1%	2%	3%
No high school	1%	1%	2%	0%	0%	1%	1%	1%	0%	0%	1%
Doctorate	1%	3%	1%	2%	2%	1%	2%	1%	0%	1%	1%
Less than 4 years of college	9%	13%	15%	13%	13%	78%	7%	9%	3%	4%	12%
Unknown	3%	1%	0%	0%	0%	0%	2%	7%	1%	0%	1%
<b>Marital Status</b>											
Missing	0%	0%	0%	0%	0%	0%	15%	18%	27%	37%	6%
Never Married	30%	34%	34%	31%	24%	28%	13%	6%	15%	20%	27%
Married	58%	52%	53%	60%	63%	61%	61%	62%	51%	37%	56%
Separated	4%	3%	3%	1%	0%	0%	3%	3%	2%	1%	3%
Divorced	8%	11%	10%	9%	12%	10%	8%	11%	5%	5%	8%
Widowed	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Status Prior to Deployment</b>											

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Missing	0%	0%	0%	0%	*	0%	57%	19%	65%	10%	12%
Active Duty	99%	20%	7%	100%	10%	5%	43%	6%	35%	3%	61%
Selected Reserves - Reserve - Unit	0%	70%	2%	*	72%	2%	0%	72%	0%	83%	10%
Selected Reserves - Reserve - AGR	0%	5%	2%	*	2%	3%	0%	1%	0%	1%	1%
Selected Reserves - Reserve - IMA	0%	1%	1%	0%	6%	0%	0%	1%	0%	1%	0%
Selected Reserves - National Guard - Unit	0%	2%	80%	0%	1%	67%	0%	0%	0%	0%	13%
Selected Reserves - National Guard - AGR	0%	0%	6%	*	0%	10%	0%	0%	0%	0%	1%
Ready Reserves - IRR	0%	1%	0%	*	1%	0%	0%	1%	0%	1%	0%
Ready Reserves - ING	0%	0%	0%	*	0%	0%	*	1%	0%	0%	0%
Civilian Government Employee	0%	0%	1%	*	7%	12%	*	0%	0%	0%	1%
Other	0%	0%	1%	*	1%	2%	0%	0%	0%	0%	0%
<b>Pay Grade</b>											
E01-E04	39%	26%	40%	33%	9%	12%	24%	17%	53%	63%	38%
E05-E06	38%	42%	39%	40%	46%	49%	43%	49%	29%	24%	38%
E07-E09	9%	12%	9%	9%	27%	24%	13%	9%	8%	5%	10%
O01-O04	10%	14%	8%	14%	11%	9%	16%	15%	7%	4%	10%
O05-O10	1%	5%	1%	3%	7%	6%	4%	10%	1%	4%	2%
W01-W05	3%	2%	2%	*	*	*	1%	0%	1%	1%	2%
<b>Status Since Return</b>											
Missing	0%	0%	0%	0%	0%	0%	57%	60%	64%	52%	14%
Maintained/returned to previous status	98%	76%	90%	100%	86%	94%	43%	17%	35%	24%	81%
Transitioned to Selected Reserves	0%	21%	7%	0%	13%	4%	0%	22%	0%	18%	4%
Transitioned to IRR	1%	2%	1%	0%	1%	0%	0%	1%	0%	5%	1%
Transitioned to ING	0%	0%	2%	0%	0%	1%	*	*	0%	0%	0%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Retired from Military Service	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Separated from Military Service	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<b>OIF Total Deployments</b>											
Missing	25%	13%	21%	33%	33%	29%	20%	18%	7%	5%	21%
1	42%	69%	62%	40%	43%	36%	55%	67%	57%	71%	50%
2	24%	16%	15%	18%	18%	24%	19%	13%	28%	21%	22%
3	7%	2%	1%	6%	4%	8%	5%	2%	6%	3%	5%
4	1%	0%	0%	2%	1%	2%	1%	0%	1%	0%	1%
5 or more	1%	0%	0%	1%	1%	1%	1%	0%	1%	0%	1%
<b>OEF Total Deployments</b>											
Missing	76%	78%	76%	62%	57%	55%	64%	70%	86%	89%	74%
1	19%	20%	22%	26%	26%	27%	27%	27%	12%	10%	20%
2	4%	2%	2%	8%	12%	11%	6%	3%	2%	1%	4%
3	1%	0%	0%	2%	3%	4%	2%	0%	0%	0%	1%
4	0%	0%	0%	1%	1%	2%	0%	0%	0%	0%	0%
5 or more	0%	0%	0%	1%	1%	2%	1%	0%	0%	0%	0%
<b>Other Total Deployments</b>											
Missing	94%	95%	91%	91%	92%	84%	78%	92%	89%	95%	92%
1	4%	4%	8%	7%	5%	9%	14%	6%	8%	3%	6%
2	1%	0%	1%	1%	2%	3%	5%	1%	2%	1%	1%
3	0%	0%	0%	1%	1%	2%	2%	1%	1%	0%	0%
4	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
5 or more	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%
<b>Any SM self-reported problems- created index*</b>											
No	19%	12%	14%	39%	39%	36%	30%	21%	25%	17%	23%
Yes	81%	88%	86%	61%	61%	64%	70%	79%	75%	83%	77%
<b>Overall PDHRA-total SM self-reported problems- created index*</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	2.58	3.31	3.32	1.4	1.46	1.39	2.02	2.53	2.08	2.63	2.44
Standard Deviation	2.21	2.38	2.41	1.63	1.71	1.57	2.12	2.26	2.06	2.18	2.23

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Median	2	3	3	1	1	1	1	2	1	2	2
Range	9	9	9	9	9	9	9	9	9	9	9
<b>1-8a. General health history- created index*</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	1.76	2.45	2.32	0.91	1.04	0.84	1.27	1.84	1.31	1.67	1.66
Standard Deviation	1.93	2.17	2.17	1.45	1.62	1.47	1.68	2.01	1.75	1.87	1.94
Median	1	2	2	0	0	0	1	1	1	1	1
Range	7	7	7	7	7	7	7	7	7	7	7
<b>1. Health assessment (past month)</b>											
Missing	1%	0%	0%	0%	0%	0%	6%	0%	4%	1%	1%
Excellent	19%	17%	15%	25%	23%	24%	26%	25%	26%	24%	21%
Very Good	31%	29%	28%	39%	40%	40%	35%	33%	33%	35%	32%
Good	35%	35%	38%	29%	31%	29%	26%	31%	28%	31%	33%
Fair	13%	15%	16%	5%	5%	5%	7%	9%	8%	8%	11%
Poor	2%	4%	4%	1%	1%	1%	1%	2%	1%	1%	2%
<b>2. Health change (compared to pre-deployment health)</b>											
Missing	1%	0%	0%	0%	0%	0%	11%	4%	9%	5%	2%
Much better now than before I deployed	6%	3%	4%	9%	6%	4%	3%	1%	2%	2%	5%
Somewhat better now than before I deployed	10%	6%	7%	15%	11%	8%	11%	8%	9%	8%	10%
About the same as before I deployed	56%	52%	52%	64%	68%	75%	58%	59%	61%	60%	58%
Somewhat worse now than before I deployed	23%	32%	30%	11%	14%	11%	15%	23%	17%	23%	22%
Much worse now than before I deployed	4%	8%	7%	1%	1%	1%	2%	5%	2%	3%	4%
<b>3. Daily activities difficult: physical problems (past 4 weeks)</b>											
Missing	1%	0%	0%	0%	1%	0%	7%	1%	4%	1%	1%
Not difficult at all	64%	63%	64%	83%	84%	86%	74%	74%	72%	73%	69%
Somewhat difficult	29%	30%	30%	15%	14%	12%	17%	21%	21%	23%	25%
Very difficult	5%	5%	5%	1%	1%	1%	1%	3%	3%	3%	4%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Extremely difficult	1%	2%	2%	0%	1%	0%	0%	1%	1%	1%	1%
<b>4. Daily activities difficult: emotional problems (past 4 weeks)</b>											
Missing	1%	0%	0%	0%	1%	0%	7%	1%	5%	1%	2%
Not difficult at all	69%	63%	64%	84%	88%	88%	69%	71%	71%	72%	71%
Somewhat difficult	23%	28%	27%	13%	10%	10%	20%	23%	20%	22%	22%
Very difficult	5%	7%	6%	1%	1%	1%	3%	4%	3%	3%	4%
Extremely difficult	2%	3%	2%	0%	0%	0%	1%	1%	1%	1%	2%
<b>5. Times seen by healthcare provider since return</b>											
0	39%	29%	39%	47%	41%	49%	38%	30%	46%	45%	40%
1	19%	15%	17%	22%	19%	21%	18%	18%	17%	17%	19%
2 to 3	23%	22%	21%	20%	22%	19%	22%	24%	19%	19%	21%
4 to 5	9%	11%	9%	6%	8%	5%	10%	9%	7%	7%	8%
6 or more	11%	23%	14%	5%	9%	5%	13%	19%	10%	12%	11%
<b>6. Hospitalized since return</b>											
Missing	1%	0%	0%	0%	0%	0%	7%	1%	4%	1%	1%
No	93%	90%	93%	97%	94%	97%	87%	92%	89%	93%	93%
Yes	6%	9%	7%	3%	6%	3%	6%	7%	6%	6%	6%
<b>7. Injured during deployment</b>											
Missing	2%	1%	1%	0%	0%	0%	7%	1%	4%	1%	2%
No	79%	69%	68%	88%	82%	87%	81%	73%	82%	76%	78%
Yes	19%	30%	31%	12%	17%	12%	12%	26%	14%	23%	20%
<b>7a. Problems related to injury</b>											
Missing	74%	64%	66%	88%	83%	88%	88%	75%	86%	77%	77%
No	12%	12%	9%	4%	6%	4%	4%	6%	4%	6%	9%
Yes	12%	22%	23%	6%	9%	7%	7%	17%	8%	15%	13%
Unsure	2%	2%	2%	1%	2%	2%	2%	3%	2%	2%	2%
<b>8. Health condition related to deployment</b>											
Missing	14%	2%	2%	1%	1%	1%	9%	1%	7%	1%	7%
No	51%	43%	42%	76%	72%	76%	62%	53%	65%	56%	56%
Yes	26%	49%	49%	17%	19%	15%	19%	36%	20%	34%	29%
Unsure	9%	6%	8%	7%	8%	7%	9%	9%	9%	9%	8%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
<b>8a. Physical health concerns- created index*</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	1.39	2.18	2.38	0.57	0.63	0.47	0.89	1.36	0.98	1.35	1.36
Standard Deviation	2.7	3.58	3.59	1.61	1.79	1.49	2.07	2.72	2.29	2.59	2.76
Median	0	0	1	0	0	0	0	0	0	0	0
Range	20	20	20	20	19	16	20	20	20	19	20
<b>8a. Health concerns reported</b>											
<b><i>Fever</i></b>											
Not checked	100%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<b><i>Cough lasting three weeks</i></b>											
Not checked	97%	96%	96%	98%	97%	98%	98%	97%	99%	98%	97%
Checked	3%	4%	4%	2%	3%	2%	2%	3%	1%	2%	3%
<b><i>Trouble breathing</i></b>											
Not checked	97%	94%	95%	98%	98%	99%	99%	97%	98%	98%	97%
Checked	3%	6%	5%	2%	2%	1%	1%	3%	2%	2%	3%
<b><i>Headache</i></b>											
Not checked	92%	88%	87%	97%	97%	98%	96%	93%	95%	94%	92%
Checked	8%	12%	13%	3%	3%	2%	4%	7%	5%	6%	8%
<b><i>Feeling weak</i></b>											
Not checked	96%	94%	94%	98%	98%	98%	98%	96%	98%	98%	96%
Checked	4%	6%	6%	2%	2%	2%	2%	4%	2%	2%	4%
<b><i>Muscle ache</i></b>											
Not checked	93%	89%	88%	97%	96%	97%	96%	92%	95%	94%	93%
Checked	7%	11%	12%	3%	4%	3%	4%	8%	5%	6%	7%
<b><i>Joints</i></b>											
Not checked	90%	83%	81%	95%	93%	95%	94%	87%	92%	87%	89%
Checked	10%	17%	19%	5%	7%	5%	6%	13%	8%	13%	11%
<b><i>Back pain</i></b>											
Not checked	84%	77%	74%	93%	94%	95%	90%	86%	88%	80%	84%
Checked	16%	23%	26%	7%	6%	5%	10%	14%	12%	20%	16%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
<i><b>Numbness in hands or feet</b></i>											
Not checked	95%	91%	90%	98%	97%	98%	97%	94%	96%	95%	94%
Checked	5%	9%	10%	2%	3%	2%	3%	6%	4%	5%	6%
<i><b>Trouble hearing</b></i>											
Not checked	93%	87%	84%	98%	97%	98%	96%	93%	93%	90%	92%
Checked	7%	13%	16%	2%	3%	2%	4%	7%	7%	10%	8%
<i><b>Ringin g in ears</b></i>											
Not checked	93%	87%	82%	97%	96%	97%	95%	92%	93%	89%	92%
Checked	7%	13%	18%	3%	4%	3%	5%	8%	7%	11%	8%
<i><b>Watery, red eyes</b></i>											
Not checked	98%	97%	96%	99%	99%	99%	99%	98%	99%	99%	98%
Checked	2%	3%	4%	1%	1%	1%	1%	2%	1%	1%	2%
<i><b>Dimming of vision</b></i>											
Not checked	99%	98%	98%	100%	100%	100%	100%	99%	99%	99%	99%
Checked	1%	2%	2%	0%	0%	0%	0%	1%	1%	1%	1%
<i><b>Chest pain or pressure</b></i>											
Not checked	97%	96%	96%	99%	99%	99%	99%	98%	98%	98%	97%
Checked	3%	4%	4%	1%	1%	1%	1%	2%	2%	2%	3%
<i><b>Dizzy</b></i>											
Not checked	97%	95%	96%	99%	99%	100%	99%	98%	99%	98%	98%
Checked	3%	5%	4%	1%	1%	0%	1%	2%	1%	2%	2%
<i><b>Diarrhea or vomiting</b></i>											
Not checked	97%	93%	93%	99%	98%	99%	98%	96%	98%	97%	97%
Checked	3%	7%	7%	1%	2%	1%	2%	4%	2%	3%	3%
<i><b>Sleeping problems/tired</b></i>											
Not checked	82%	76%	74%	91%	92%	94%	87%	83%	88%	86%	83%
Checked	18%	24%	26%	9%	8%	6%	13%	17%	12%	14%	17%
<i><b>Trouble concentrating</b></i>											
Not checked	91%	86%	86%	97%	97%	98%	93%	91%	94%	92%	92%
Checked	9%	14%	14%	3%	3%	2%	7%	9%	6%	8%	8%
<i><b>Trouble with memory</b></i>											

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Not checked	89%	85%	83%	96%	96%	97%	93%	91%	93%	92%	90%
Checked	11%	15%	17%	4%	4%	3%	7%	9%	7%	8%	10%
<b>Indecisive</b>											
Not checked	95%	91%	91%	98%	98%	99%	96%	95%	97%	96%	95%
Checked	5%	9%	9%	2%	2%	1%	4%	5%	3%	4%	5%
<b>Increased irritability</b>											
Not checked	86%	81%	80%	95%	95%	96%	89%	87%	91%	88%	87%
Checked	14%	19%	20%	5%	5%	4%	11%	13%	9%	12%	13%
<b>Taking more risks</b>											
Not checked	98%	95%	94%	99%	99%	99%	98%	97%	98%	96%	97%
Checked	2%	5%	6%	1%	1%	1%	2%	3%	2%	4%	3%
<b>Skin disease or rash</b>											
Not checked	97%	93%	94%	98%	97%	97%	97%	94%	98%	97%	96%
Checked	3%	7%	6%	2%	3%	3%	3%	6%	2%	3%	4%
<b>Other</b>											
Not checked	95%	73%	80%	96%	95%	95%	93%	79%	94%	86%	91%
Checked	5%	27%	20%	4%	5%	5%	7%	21%	6%	14%	9%
<b>9d. Have any TBI symptoms- created index*</b>											
Missing	22%	23%	30%	32%	34%	28%	26%	22%	20%	21%	24%
No	59%	58%	53%	66%	64%	71%	62%	66%	69%	66%	61%
Yes	19%	19%	17%	2%	1%	1%	11%	12%	11%	13%	14%
<b>9d. TBI symptoms- created index*</b>											
N	60037	12254	18216	16439	1578	4462	5652	2442	22743	3643	147466
Mean	0.65	0.77	0.8	0.08	0.06	0.04	0.34	0.4	0.33	0.39	0.52
Standard Deviation	1.39	1.63	1.69	0.5	0.53	0.39	0.96	1.13	1	1.07	1.3
Median	0	0	0	0	0	0	0	0	0	0	0
Range	7	7	7	7	7	7	7	7	7	7	7
<b>9a. Experienced following event:</b>											
<b>Blast or explosion</b>											
Missing	3%	1%	1%	0%	0%	0%	8%	2%	6%	2%	2%
No	59%	60%	60%	74%	76%	79%	66%	73%	73%	76%	65%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Yes	38%	39%	39%	25%	23%	20%	26%	25%	21%	23%	33%
<b>Crash</b>											
Missing	5%	2%	2%	0%	0%	0%	10%	3%	7%	3%	4%
No	85%	88%	87%	96%	97%	97%	84%	92%	87%	90%	88%
Yes	10%	11%	11%	4%	3%	2%	6%	5%	6%	7%	8%
<b>Fragment/bullet wound (above shoulders)</b>											
Missing	6%	2%	2%	0%	0%	0%	10%	3%	8%	3%	4%
No	93%	97%	97%	99%	99%	99%	89%	97%	92%	97%	95%
Yes	1%	1%	1%	0%	0%	0%	0%	0%	1%	0%	1%
<b>Fall</b>											
Missing	5%	1%	2%	0%	0%	0%	10%	3%	7%	2%	4%
No	80%	84%	83%	94%	92%	95%	82%	86%	83%	83%	84%
Yes	15%	15%	15%	6%	7%	4%	8%	12%	10%	15%	12%
<b>Other injury</b>											
Missing	8%	3%	4%	1%	0%	1%	12%	4%	10%	5%	6%
No	85%	87%	85%	90%	87%	91%	79%	84%	84%	86%	86%
Yes	7%	9%	10%	9%	12%	9%	9%	11%	6%	9%	8%
<b>9b. Problems immediately after event (from 9a)</b>											
<b>Knocked out</b>											
Missing	32%	40%	42%	65%	64%	71%	67%	65%	72%	64%	48%
No	64%	56%	54%	34%	35%	29%	32%	34%	26%	34%	49%
Yes	4%	4%	3%	0%	0%	0%	1%	1%	2%	2%	3%
<b>Dazed</b>											
Missing	31%	40%	42%	65%	64%	71%	67%	64%	72%	63%	48%
No	55%	45%	44%	32%	34%	28%	29%	30%	22%	29%	42%
Yes	13%	15%	14%	3%	2%	1%	4%	6%	6%	8%	10%
<b>Memory loss of event</b>											
Missing	32%	40%	42%	65%	64%	71%	67%	65%	73%	64%	48%
No	65%	56%	54%	34%	35%	29%	32%	34%	26%	34%	49%
Yes	3%	4%	4%	0%	0%	0%	1%	1%	1%	2%	2%
<b>Concussion</b>											

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Missing	32%	41%	42%	65%	64%	71%	67%	65%	73%	64%	48%
No	64%	56%	54%	34%	36%	29%	32%	34%	26%	34%	49%
Yes	4%	4%	4%	0%	0%	0%	1%	1%	2%	2%	3%
<b>Head injury</b>											
Missing	32%	40%	42%	65%	64%	71%	67%	65%	73%	64%	48%
No	64%	55%	53%	34%	35%	29%	32%	33%	25%	33%	49%
Yes	4%	5%	4%	1%	1%	0%	1%	2%	2%	3%	3%
<b>9c. Problems got worse after event (from 9a)</b>											
<b>Memory lapses</b>											
Missing	52%	62%	70%	95%	97%	97%	67%	67%	73%	65%	67%
No	41%	30%	23%	4%	2%	3%	29%	30%	24%	31%	28%
Yes	7%	8%	8%	1%	0%	0%	3%	3%	4%	4%	5%
<b>Dizziness</b>											
Missing	52%	62%	70%	95%	97%	97%	68%	67%	73%	65%	67%
No	44%	31%	25%	5%	2%	3%	31%	31%	25%	32%	30%
Yes	4%	6%	5%	1%	0%	0%	1%	2%	2%	3%	3%
<b>Ringings in ears</b>											
Missing	52%	62%	70%	95%	97%	97%	67%	66%	72%	65%	67%
No	39%	26%	19%	4%	2%	3%	27%	27%	21%	26%	26%
Yes	9%	12%	12%	1%	1%	0%	6%	7%	7%	9%	8%
<b>Sensitive to light</b>											
Missing	53%	62%	70%	95%	97%	97%	68%	67%	73%	65%	67%
No	44%	31%	24%	5%	2%	3%	31%	30%	25%	32%	30%
Yes	4%	7%	6%	0%	0%	0%	2%	3%	2%	3%	3%
<b>Irritability</b>											
Missing	52%	62%	70%	95%	97%	97%	67%	66%	72%	65%	67%
No	37%	26%	19%	4%	2%	2%	25%	26%	21%	27%	25%
Yes	11%	12%	11%	1%	1%	1%	8%	7%	6%	8%	8%
<b>Headaches</b>											
Missing	52%	62%	70%	95%	97%	97%	67%	67%	73%	65%	67%
No	38%	27%	20%	4%	2%	2%	28%	27%	23%	29%	26%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Yes	9%	11%	10%	1%	1%	1%	5%	6%	5%	6%	7%
<b><i>Sleep problems</i></b>											
Missing	52%	62%	70%	95%	97%	97%	67%	66%	72%	67%	67%
No	35%	23%	18%	3%	2%	2%	23%	23%	20%	25%	23%
Yes	13%	15%	13%	2%	1%	1%	11%	10%	8%	9%	10%
<b>9d. Symptoms in past week (from 9c)</b>											
<b><i>Memory lapses</i></b>											
Missing	64%	70%	75%	98%	98%	99%	95%	92%	93%	94%	78%
No	31%	24%	18%	1%	1%	1%	3%	5%	4%	4%	18%
Yes	5%	7%	6%	0%	0%	0%	2%	3%	2%	2%	4%
<b><i>Dizziness</i></b>											
Missing	55%	67%	74%	97%	98%	99%	96%	93%	94%	94%	74%
No	43%	29%	23%	2%	2%	1%	3%	5%	5%	5%	23%
Yes	3%	4%	4%	0%	0%	0%	1%	2%	1%	1%	2%
<b><i>Ring in ears</i></b>											
Missing	55%	66%	73%	97%	98%	99%	92%	89%	90%	89%	73%
No	39%	25%	18%	2%	1%	1%	4%	6%	5%	5%	21%
Yes	7%	9%	10%	1%	1%	0%	3%	5%	5%	6%	6%
<b><i>Sensitive to light</i></b>											
Missing	55%	67%	73%	97%	98%	99%	96%	93%	94%	94%	74%
No	42%	28%	22%	2%	2%	1%	3%	5%	4%	4%	23%
Yes	3%	5%	5%	0%	0%	0%	1%	2%	2%	2%	3%
<b><i>Irritability</i></b>											
Missing	54%	66%	73%	97%	98%	98%	90%	89%	90%	89%	73%
No	35%	23%	17%	2%	1%	1%	4%	5%	4%	4%	19%
Yes	11%	11%	10%	1%	1%	1%	6%	6%	5%	7%	8%
<b><i>Headaches</i></b>											
Missing	54%	66%	73%	97%	98%	98%	93%	90%	92%	91%	73%
No	37%	25%	18%	2%	1%	1%	4%	5%	4%	4%	20%
Yes	8%	9%	9%	1%	1%	1%	3%	5%	4%	5%	6%
<b><i>Sleep problems</i></b>											

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Missing	54%	66%	73%	97%	98%	98%	88%	86%	89%	89%	73%
No	32%	21%	15%	2%	1%	1%	4%	5%	4%	4%	18%
Yes	13%	13%	12%	1%	1%	1%	8%	8%	7%	7%	10%
<b>10. Exposure concerns</b>											
Missing	16%	2%	2%	3%	2%	2%	11%	2%	8%	2%	9%
No	61%	63%	61%	73%	69%	68%	68%	64%	73%	71%	65%
Yes	23%	35%	37%	24%	29%	30%	21%	34%	19%	27%	26%
<b>10a. Have any exposure concerns- created index*</b>											
No	77%	66%	64%	76%	72%	70%	80%	68%	81%	75%	75%
Yes	23%	34%	36%	24%	28%	30%	20%	32%	19%	25%	25%
<b>10a. Exposure concerns- created index*</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	1.23	1.75	2.05	1.01	1.11	1.2	0.96	1.48	0.99	1.25	1.31
Standard Deviation	2.87	3.42	3.68	2.37	2.4	2.51	2.5	3	2.66	2.95	2.95
Median	0	0	0	0	0	0	0	0	0	0	0
Range	19	19	19	19	19	19	19	19	19	18	19
<b>10a. Reported exposure concerns</b>											
<i>Animal bites</i>											
Not checked	100%	99%	99%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<i>Animal bodies (dead)</i>											
Not checked	98%	97%	97%	99%	99%	99%	99%	98%	98%	98%	98%
Checked	2%	3%	3%	1%	1%	1%	1%	2%	2%	2%	2%
<i>Chlorine gas</i>											
Not checked	99%	99%	99%	100%	100%	100%	100%	99%	99%	100%	99%
Checked	1%	1%	1%	0%	0%	0%	0%	1%	1%	0%	1%
<i>Depleted uranium</i>											
Not checked	99%	97%	98%	99%	99%	99%	99%	99%	99%	99%	99%
Checked	1%	3%	2%	1%	1%	1%	1%	1%	1%	1%	1%
<i>Excessive vibration</i>											
Not checked	93%	91%	89%	97%	98%	97%	96%	94%	95%	93%	94%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Checked	7%	9%	11%	3%	2%	3%	4%	6%	5%	7%	6%
<b><i>Fog oils</i></b>											
Not checked	98%	97%	96%	98%	98%	99%	99%	98%	99%	98%	98%
Checked	2%	3%	4%	2%	2%	1%	1%	2%	1%	2%	2%
<b><i>Garbage</i></b>											
Not checked	90%	87%	84%	92%	93%	92%	93%	89%	93%	91%	90%
Checked	10%	13%	16%	8%	7%	8%	7%	11%	7%	9%	10%
<b><i>Human blood/bodily fluids/bodies</i></b>											
Not checked	95%	94%	93%	97%	96%	98%	95%	95%	97%	96%	95%
Checked	5%	6%	7%	3%	4%	2%	5%	5%	3%	4%	5%
<b><i>Industrial pollution</i></b>											
Not checked	93%	88%	87%	93%	91%	91%	94%	90%	96%	95%	92%
Checked	7%	12%	13%	7%	9%	9%	6%	10%	4%	5%	8%
<b><i>Insect bites</i></b>											
Not checked	95%	92%	92%	97%	96%	96%	95%	94%	96%	96%	95%
Checked	5%	8%	8%	3%	4%	4%	5%	6%	4%	4%	5%
<b><i>Ionizing radiation</i></b>											
Not checked	100%	99%	99%	99%	100%	99%	99%	99%	100%	99%	99%
Checked	0%	1%	1%	1%	0%	1%	1%	1%	0%	1%	1%
<b><i>JP8/other fuels</i></b>											
Not checked	91%	89%	87%	95%	95%	92%	95%	92%	91%	88%	91%
Checked	9%	11%	13%	5%	5%	8%	5%	8%	9%	12%	9%
<b><i>Lasers</i></b>											
Not checked	98%	98%	96%	99%	99%	99%	99%	99%	98%	97%	98%
Checked	2%	2%	4%	1%	1%	1%	1%	1%	2%	3%	2%
<b><i>Loud noises</i></b>											
Not checked	86%	81%	77%	88%	86%	85%	89%	84%	88%	84%	85%
Checked	14%	19%	23%	12%	14%	15%	11%	16%	12%	16%	15%
<b><i>Paints</i></b>											
Not checked	98%	96%	96%	98%	99%	98%	98%	97%	98%	98%	98%
Checked	2%	4%	4%	2%	1%	2%	2%	3%	2%	2%	2%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
<b><i>Pesticides</i></b>											
Not checked	98%	95%	95%	98%	98%	97%	97%	96%	97%	97%	97%
Checked	2%	5%	5%	2%	2%	3%	3%	4%	3%	3%	3%
<b><i>Radar/microwaves</i></b>											
Not checked	97%	96%	94%	98%	98%	96%	98%	97%	97%	95%	96%
Checked	3%	4%	6%	2%	2%	4%	2%	3%	3%	5%	4%
<b><i>Sand/dust</i></b>											
Not checked	83%	76%	72%	85%	82%	81%	86%	77%	87%	84%	82%
Checked	17%	24%	28%	15%	18%	19%	14%	23%	13%	16%	18%
<b><i>Smoke: burning trash or feces</i></b>											
Not checked	84%	76%	73%	80%	78%	74%	86%	76%	88%	85%	82%
Checked	16%	24%	27%	20%	22%	26%	14%	24%	12%	15%	18%
<b><i>Smoke: oil fire</i></b>											
Not checked	95%	92%	91%	95%	92%	95%	96%	94%	97%	97%	94%
Checked	5%	8%	9%	5%	8%	5%	4%	6%	3%	3%	6%
<b><i>Solvents</i></b>											
Not checked	97%	95%	95%	98%	98%	98%	98%	96%	97%	96%	97%
Checked	3%	5%	5%	2%	2%	2%	2%	4%	3%	4%	3%
<b><i>Smoke: tent heater</i></b>											
Not checked	99%	98%	98%	99%	99%	99%	99%	98%	99%	98%	99%
Checked	1%	2%	2%	1%	1%	1%	1%	2%	1%	2%	1%
<b><i>Exhaust fumes</i></b>											
Not checked	90%	87%	83%	93%	93%	93%	93%	89%	91%	88%	90%
Checked	10%	13%	17%	7%	7%	7%	7%	11%	9%	12%	10%
<b><i>Other</i></b>											
Not checked	98%	92%	95%	98%	98%	98%	97%	90%	97%	95%	97%
Checked	2%	8%	5%	2%	2%	2%	3%	10%	3%	5%	3%
<b>11. Concern about relationship conflicts</b>											
Missing	3%	1%	0%	1%	1%	1%	8%	1%	5%	1%	3%
No	77%	74%	74%	90%	89%	91%	75%	79%	78%	80%	79%
Yes	13%	20%	19%	5%	6%	5%	11%	14%	10%	12%	13%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Unsure	7%	6%	6%	3%	4%	3%	6%	6%	7%	7%	6%
<b>12. Any PTSD symptoms- created index*</b>											
Missing	1%	0%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	74%	58%	61%	90%	90%	92%	74%	72%	78%	75%	74%
Yes	25%	42%	39%	10%	10%	7%	19%	27%	17%	25%	24%
<b>12. PTSD symptoms- created index*</b>											
N	75611	15987	25805	24011	2384	6167	7119	3109	27218	4569	191980
Mean	0.54	0.97	0.89	0.18	0.19	0.13	0.43	0.56	0.36	0.48	0.53
Standard Deviation	1.08	1.36	1.32	0.64	0.68	0.53	0.98	1.09	0.88	0.99	1.08
Median	0	0	0	0	0	0	0	0	0	0	0
Range	4	4	4	4	4	4	4	4	4	4	4
<b>12a. Nightmares about upsetting experience (past month)</b>											
Missing	2%	0%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	86%	80%	82%	95%	95%	96%	84%	89%	88%	91%	87%
Yes	13%	20%	18%	5%	4%	3%	9%	10%	7%	8%	11%
<b>12b. Tried not to think about upsetting experience (past month)</b>											
Missing	2%	0%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	87%	78%	82%	96%	95%	97%	84%	87%	89%	90%	87%
Yes	11%	22%	18%	3%	4%	2%	8%	12%	7%	9%	11%
<b>12c. Constantly on guard or easily startled (past month)</b>											
Missing	2%	0%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	82%	69%	70%	93%	93%	95%	81%	80%	84%	82%	82%
Yes	16%	31%	30%	6%	6%	4%	12%	19%	11%	17%	17%
<b>12d. Numb or detached from others (past month)</b>											
Missing	2%	1%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	85%	75%	77%	94%	94%	95%	82%	84%	86%	85%	85%
Yes	13%	24%	23%	4%	5%	3%	10%	15%	9%	14%	13%
<b>13. Alcohol problems- created index*</b>											
Missing	4%	1%	0%	1%	1%	1%	14%	13%	15%	9%	5%
No	50%	57%	52%	73%	76%	67%	49%	54%	37%	36%	53%
Yes	45%	42%	47%	26%	23%	32%	37%	33%	49%	56%	42%
<b>13a. Used alcohol more than meant to (past month)</b>											

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
<b>Sample size</b>	<b>76663</b>	<b>16010</b>	<b>25847</b>	<b>24168</b>	<b>2397</b>	<b>6220</b>	<b>7667</b>	<b>3143</b>	<b>28541</b>	<b>4606</b>	<b>195262</b>
Missing	1%	0%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	90%	89%	88%	98%	97%	97%	89%	93%	88%	89%	91%
Yes	8%	11%	11%	1%	2%	2%	4%	6%	7%	10%	7%
<b>13b. Wanted or needed to cut down on alcohol (past month)</b>											
Missing	2%	0%	0%	1%	1%	1%	7%	1%	5%	1%	2%
No	91%	89%	89%	98%	97%	97%	89%	93%	88%	89%	91%
Yes	7%	10%	11%	1%	2%	2%	4%	6%	7%	10%	7%
<b>13c. How often drink alcohol</b>											
Missing	4%	1%	1%	1%	1%	1%	14%	13%	15%	9%	5%
Never	16%	18%	17%	16%	17%	11%	5%	3%	5%	3%	14%
Monthly or less	22%	23%	24%	39%	38%	31%	29%	30%	23%	24%	25%
2 to 4 times a month	31%	30%	30%	32%	30%	38%	31%	31%	32%	33%	31%
2 to 3 times a week	20%	19%	20%	10%	11%	16%	16%	17%	19%	23%	18%
4 or more times a week	7%	8%	9%	2%	2%	3%	4%	6%	6%	9%	6%
<b>13d. How many drinks per day when drinking</b>											
Missing	21%	19%	17%	13%	15%	10%	45%	58%	37%	34%	23%
1 or 2	38%	44%	39%	57%	62%	59%	19%	13%	13%	12%	37%
3 or 4	24%	23%	25%	24%	18%	24%	25%	21%	27%	30%	24%
5 or 6	11%	9%	12%	5%	4%	5%	7%	6%	14%	15%	10%
7 to 9	4%	3%	4%	1%	1%	1%	2%	1%	6%	6%	4%
10 or more	3%	2%	3%	0%	0%	0%	1%	1%	4%	4%	2%
<b>13e. How often drink six or more drinks on one occasion</b>											
Missing	17%	14%	15%	3%	3%	3%	33%	45%	27%	24%	17%
Never	28%	39%	29%	58%	63%	50%	17%	12%	10%	9%	30%
Less than monthly	31%	25%	30%	32%	27%	37%	36%	30%	34%	34%	31%
Monthly	13%	12%	15%	6%	5%	9%	10%	9%	16%	19%	13%
Weekly	10%	8%	10%	1%	1%	2%	4%	4%	12%	13%	8%
Daily	1%	1%	2%	0%	0%	0%	0%	0%	1%	1%	1%
<b>14. Any depressive symptoms- created index*</b>											
Missing	1%	0%	0%	1%	1%	1%	44%	53%	46%	47%	11%
No	88%	85%	86%	96%	96%	96%	49%	37%	44%	44%	79%
Yes	11%	15%	14%	4%	3%	3%	7%	10%	10%	9%	10%

## DoD Project Final Report: Contract # W81XWH-07-P-1026

Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
<b>14. Depressive symptoms- created index*</b>											
N	75825	15981	25793	23998	2379	6163	4292	1462	15400	2457	173750
Mean	0.16	0.23	0.2	0.05	0.05	0.04	0.19	0.33	0.26	0.24	0.16
Standard Deviation	0.48	0.57	0.54	0.29	0.27	0.24	0.52	0.67	0.59	0.56	0.49
Median	0	0	0	0	0	0	0	0	0	0	0
Range	2	2	2	2	2	2	2	2	2	2	2
<b>14a. Little interest in things (past month)</b>											
Missing	1%	0%	0%	1%	1%	1%	47%	58%	49%	50%	12%
Not at all	67%	66%	65%	82%	84%	85%	27%	16%	23%	22%	59%
Few or several days	23%	21%	23%	14%	12%	12%	20%	18%	20%	21%	21%
More than half the days	6%	7%	7%	2%	1%	1%	4%	5%	6%	5%	5%
Nearly every day	3%	6%	5%	1%	1%	1%	2%	4%	3%	2%	3%
<b>14b. Feeling down or hopeless (past month)</b>											
Missing	1%	0%	0%	1%	1%	1%	49%	58%	53%	53%	13%
Not at all	73%	68%	69%	86%	87%	87%	29%	16%	25%	24%	64%
Few or several days	19%	22%	21%	11%	10%	10%	18%	19%	17%	17%	18%
More than half the days	4%	6%	5%	2%	1%	1%	3%	4%	4%	4%	4%
Nearly every day	2%	4%	4%	1%	1%	1%	1%	2%	2%	1%	2%
<b>15-18. Any requests for support- created index*</b>											
Missing	1%	0%	0%	1%	1%	1%	6%	1%	4%	0%	1%
No	82%	68%	69%	91%	91%	92%	80%	78%	85%	80%	81%
Yes	18%	32%	31%	8%	9%	7%	14%	21%	11%	20%	18%
<b>15-18. Requests for support- created index*</b>											
N	76126	15992	25815	24023	2382	6171	7203	3123	27491	4583	192909
Mean	0.28	0.56	0.53	0.1	0.11	0.09	0.23	0.35	0.17	0.31	0.29
Standard Deviation	0.7	0.99	0.95	0.39	0.41	0.4	0.65	0.81	0.56	0.74	0.72
Median	0	0	0	0	0	0	0	0	0	0	0
Range	4	4	4	4	4	4	4	4	4	4	4
<b>15. Request healthcare visit</b>											
Missing	1%	0%	0%	1%	1%	1%	6%	1%	4%	1%	1%
No	85%	75%	75%	93%	92%	94%	83%	84%	88%	84%	85%
Yes	14%	25%	25%	6%	7%	5%	11%	15%	8%	15%	14%

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Questions in SM portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
<b>16. Request information on or assistance for stress, emotional or alcohol concern</b>											
Missing	1%	0%	0%	1%	1%	1%	6%	1%	4%	1%	1%
No	92%	84%	86%	98%	97%	97%	88%	89%	92%	91%	91%
Yes	7%	16%	14%	2%	2%	2%	6%	10%	4%	9%	7%
<b>17. Request help for family or relationship concern</b>											
Missing	1%	0%	0%	1%	1%	1%	6%	1%	4%	1%	1%
No	95%	89%	90%	98%	98%	97%	90%	92%	93%	94%	94%
Yes	5%	11%	10%	1%	1%	2%	4%	8%	3%	6%	5%
<b>18. Request to see Chaplain or community support counselor</b>											
Missing	1%	0%	0%	1%	1%	1%	6%	1%	4%	1%	1%
No	97%	95%	96%	99%	99%	99%	92%	97%	95%	98%	97%
Yes	2%	4%	4%	1%	0%	0%	1%	3%	1%	2%	2%

\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHRA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.

\*\*Note: Asterisks indicate that there were no SMs endorsing the response.

**Table N.4 January 2008 DD Form 2900 Items – Descriptive Statistics by Service Branch/Component- OIF/OEF**

Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
<b>1. Review symptoms or concerns</b>											
Missing	0%	0%	1%	40%	38%	3%	47%	58%	53%	57%	18%
Confirmed	92%	75%	78%	38%	41%	79%	35%	16%	26%	25%	66%
Modified	8%	25%	22%	23%	21%	17%	18%	26%	22%	18%	16%
<b>2a. Thoughts of harming self (past month)</b>											
Missing	1%	1%	1%	39%	38%	3%	0%	0%	0%	0%	6%
No	98%	97%	97%	60%	62%	96%	99%	99%	99%	99%	93%
Yes	1%	2%	2%	0%	0%	0%	0%	1%	0%	1%	1%
<b>2a. How often bothered by thoughts of harming self</b>											
Missing	99%	98%	98%	100%	100%	100%	100%	100%	100%	100%	99%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
A few days	0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%
More than half of the time	0%	0%	0%	0%	*	*	0%	0%	0%	0%	0%
Nearly every day	0%	0%	0%	0%	0%	*	0%	0%	0%	0%	0%
<b>2b. Thoughts of hurting/losing control with someone</b>											
Missing	3%	1%	1%	39%	38%	3%	0%	0%	0%	0%	7%
No	95%	92%	93%	60%	62%	96%	98%	97%	98%	97%	91%
Yes	2%	6%	5%	0%	1%	0%	2%	3%	1%	3%	2%
Unsure	1%	1%	1%	0%	0%	0%	1%	0%	0%	1%	1%
<b>3a. Provider determined risk to self or others</b>											
Missing	86%	89%	91%	98%	99%	98%	98%	96%	98%	96%	92%
No	13%	10%	8%	2%	1%	2%	2%	3%	1%	3%	8%
Yes	0%	0%	0%	0%	0%	*	0%	*	0%	0%	0%
Unsure	1%	1%	1%	0%	0%	0%	0%	1%	0%	0%	1%
<b>3b. Outcome of risk assessment</b>											
Missing	88%	91%	92%	73%	73%	74%	98%	97%	98%	97%	88%
Immediate referral	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Routine follow-up referral	2%	5%	4%	2%	2%	0%	1%	2%	1%	2%	2%
Referral not indicated	10%	4%	3%	25%	25%	26%	1%	1%	0%	1%	9%
<b>4a. Alcohol screening result</b>											
Missing	1%	3%	3%	39%	38%	3%	37%	54%	36%	32%	15%
No evidence	72%	64%	67%	47%	46%	68%	28%	15%	20%	14%	55%
Evidence	27%	33%	30%	14%	17%	29%	35%	31%	44%	55%	30%
<b>4b. Alcohol PCM referral indicated</b>											
Missing	1%	3%	3%	39%	38%	3%	37%	54%	36%	32%	15%
No	83%	88%	83%	59%	62%	96%	60%	44%	59%	63%	75%
Yes	16%	9%	14%	1%	1%	0%	3%	3%	5%	5%	10%
<b>5a. TBI risk assessment</b>											
Missing	4%	4%	5%	40%	38%	3%	39%	53%	50%	50%	19%
No evidence	87%	79%	81%	59%	61%	96%	31%	16%	26%	22%	68%
Evidence	9%	17%	15%	2%	1%	1%	29%	31%	24%	28%	13%
<b>5b. TBI referral indicated</b>											
Missing	4%	4%	5%	40%	38%	3%	39%	53%	50%	50%	19%
No	91%	90%	88%	60%	62%	96%	58%	44%	46%	45%	77%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Yes	5%	6%	7%	1%	0%	0%	3%	3%	4%	5%	4%
<b>7. Any clinician major concern- created index*</b>											
No	85%	69%	70%	95%	93%	93%	88%	79%	85%	78%	83%
Yes	15%	31%	30%	5%	7%	7%	12%	21%	15%	22%	17%
<b>7. Number of major concerns- created index*</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	0.22	0.6	0.58	0.07	0.1	0.09	0.19	0.38	0.23	0.37	0.28
Standard deviation	0.62	1.18	1.14	0.35	0.46	0.43	0.59	0.95	0.66	0.87	0.78
Median	0	0	0	0	0	0	0	0	0	0	0
Range	8	9	9	6	6	7	7	8	7	7	9
<b>7. Physical symptoms</b>											
<i>Clinician concern</i>											
No Concern	71%	45%	46%	85%	82%	81%	88%	77%	86%	75%	71%
Minor Concern	19%	31%	31%	11%	14%	13%	6%	6%	5%	8%	17%
Major Concern	10%	24%	23%	4%	5%	5%	6%	17%	9%	17%	12%
<i>SM Already under care</i>											
Missing	71%	45%	46%	86%	82%	81%	79%	57%	75%	58%	68%
Not checked	13%	25%	27%	5%	7%	8%	8%	18%	13%	27%	15%
Checked	16%	30%	27%	9%	11%	11%	12%	25%	12%	15%	17%
<b>7. Exposure symptoms</b>											
<i>Clinician concern</i>											
No Concern	87%	81%	82%	93%	90%	87%	98%	95%	98%	95%	89%
Minor Concern	12%	17%	15%	7%	8%	12%	2%	3%	1%	3%	10%
Major Concern	1%	3%	3%	1%	2%	1%	1%	2%	1%	2%	1%
<i>SM already under care</i>											
Missing	87%	81%	82%	94%	90%	86%	96%	84%	94%	87%	88%
Not checked	12%	14%	14%	5%	7%	11%	3%	12%	6%	11%	10%
Checked	1%	5%	5%	1%	2%	2%	1%	4%	1%	2%	2%
<b>7. Depression symptoms</b>											
<i>Clinician concern</i>											
No Concern	86%	78%	82%	97%	96%	95%	95%	93%	96%	94%	89%
Minor Concern	11%	14%	12%	2%	3%	4%	2%	3%	2%	2%	8%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Major Concern	3%	8%	7%	1%	1%	1%	3%	5%	3%	4%	3%
<i>SM already under care</i>											
Missing	87%	78%	82%	97%	96%	95%	92%	86%	93%	88%	88%
Not checked	9%	13%	11%	2%	3%	4%	5%	8%	6%	9%	8%
Checked	4%	9%	7%	1%	1%	1%	3%	5%	2%	2%	4%
<b>7. PTSD symptoms</b>											
<i>Clinician concern</i>											
No Concern	87%	70%	75%	97%	96%	96%	94%	91%	96%	93%	88%
Minor Concern	9%	18%	14%	2%	3%	3%	2%	2%	1%	2%	8%
Major Concern	3%	12%	11%	1%	1%	1%	4%	7%	3%	5%	5%
<i>SM already under care</i>											
Missing	88%	70%	75%	97%	96%	96%	92%	83%	93%	86%	87%
Not checked	9%	18%	15%	2%	3%	3%	5%	11%	5%	10%	9%
Checked	3%	12%	10%	1%	1%	1%	3%	7%	2%	3%	4%
<b>7. Anger/Aggression symptoms</b>											
<i>Clinician concern</i>											
No Concern	97%	94%	92%	99%	99%	99%	98%	98%	98%	98%	97%
Minor Concern	2%	4%	4%	1%	1%	0%	1%	1%	1%	1%	2%
Major Concern	1%	3%	3%	0%	0%	0%	1%	1%	2%	2%	1%
<i>SM already under care</i>											
Missing	97%	94%	93%	99%	99%	99%	97%	97%	97%	96%	96%
Not checked	2%	4%	5%	1%	1%	1%	2%	2%	3%	3%	3%
Checked	1%	2%	3%	0%	0%	0%	1%	1%	1%	1%	1%
<b>7. Suicidal ideation</b>											
<i>Clinician concern</i>											
No Concern	100%	99%	99%	100%	100%	100%	100%	100%	100%	100%	99%
Minor Concern	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
Major Concern	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%
<i>SM already under care</i>											
Missing	100%	98%	99%	99%	99%	100%	100%	99%	100%	100%	99%
Not checked	0%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Checked	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
<b>7. Social/family conflict</b>											
<i>Clinician concern</i>											
No Concern	90%	83%	85%	97%	96%	96%	97%	94%	97%	95%	91%
Minor Concern	8%	10%	9%	2%	3%	3%	1%	2%	1%	2%	6%
Major Concern	2%	6%	6%	1%	1%	1%	2%	4%	2%	3%	3%
<i>SM already under care</i>											
Missing	91%	83%	85%	97%	96%	96%	95%	89%	94%	91%	91%
Not checked	7%	10%	10%	2%	3%	3%	3%	7%	4%	7%	6%
Checked	3%	6%	5%	1%	1%	1%	2%	4%	2%	2%	3%
<b>7. Alcohol use</b>											
<i>Clinician concern</i>											
No Concern	88%	85%	86%	97%	97%	94%	97%	97%	96%	94%	91%
Minor Concern	10%	12%	11%	2%	3%	6%	2%	2%	2%	3%	8%
Major Concern	1%	3%	3%	0%	1%	0%	1%	1%	2%	3%	2%
<i>SM already under care</i>											
Missing	88%	85%	86%	97%	96%	94%	95%	90%	91%	85%	90%
Not checked	10%	12%	12%	2%	3%	6%	4%	9%	8%	14%	9%
Checked	1%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%
<b>7. Other</b>											
<i>Clinician concern</i>											
No Concern	98%	97%	97%	99%	100%	99%	98%	99%	98%	98%	98%
Minor Concern	2%	2%	2%	1%	0%	0%	1%	0%	1%	1%	1%
Major Concern	1%	2%	2%	0%	0%	0%	1%	1%	1%	1%	1%
<i>SM already under care</i>											
Missing	97%	97%	97%	99%	99%	99%	97%	98%	97%	97%	97%
Not checked	2%	2%	2%	1%	1%	1%	3%	1%	2%	2%	2%
Checked	1%	1%	1%	0%	0%	0%	1%	1%	1%	0%	1%
<b>8. Number of referrals- created index*</b>											
N	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Mean	0.33	0.6	0.66	0.21	0.18	0.14	0.36	0.41	0.42	0.54	0.39
Standard deviation	0.66	0.9	0.97	0.5	0.47	0.44	0.74	0.77	0.84	0.83	0.76
Median	0	0	0	0	0	0	0	0	0	0	0

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Range	11	9	10	6	4	7	10	8	10	6	11
<b>8. Any referral- created index*</b>											
No Referral	75%	60%	57%	82%	85%	89%	75%	71%	73%	62%	72%
Any Referral	25%	40%	43%	18%	15%	11%	25%	29%	27%	38%	28%
<b>8. Received medical referral (a-d)- created index*</b>											
No	83%	73%	68%	90%	93%	95%	82%	81%	84%	72%	81%
Yes	17%	27%	32%	10%	7%	5%	18%	19%	16%	28%	19%
<b>8. Primary care (a)- created index*</b>											
No	89%	77%	72%	93%	95%	95%	90%	84%	88%	76%	86%
Yes	11%	23%	28%	7%	5%	5%	10%	16%	12%	24%	14%
<b>8. Behavioral care (b,c)- created index*</b>											
No	93%	89%	86%	97%	98%	99%	92%	94%	96%	90%	93%
Yes	7%	11%	14%	3%	2%	1%	8%	6%	4%	10%	7%
<b>8. Specialty physical care (d)- created index*</b>											
No	97%	99%	98%	99%	99%	100%	96%	99%	96%	98%	98%
Yes	3%	1%	2%	1%	1%	0%	4%	1%	4%	2%	2%
<b>8. Military OneSource (j)- created index*</b>											
No	98%	89%	92%	99%	98%	98%	98%	95%	94%	94%	96%
Yes	2%	11%	8%	1%	2%	2%	2%	5%	6%	6%	4%
<b>8. Other non-medical referral (e-k, except j)- created index*</b>											
No	93%	97%	97%	98%	99%	100%	95%	97%	92%	97%	95%
Yes	7%	3%	3%	2%	1%	0%	5%	3%	8%	3%	5%
<b>8. Referral indicated</b>											
<b>Primary care</b>											
Within 24 hours	0%	0%	0%	0%	0%	0%	*	*	*	*	0%
Within 7 days	3%	1%	2%	3%	0%	0%	3%	1%	6%	1%	3%
Within 30 days	8%	22%	26%	4%	5%	4%	7%	15%	6%	24%	11%
No Referral	89%	77%	72%	93%	95%	95%	90%	84%	88%	76%	86%
<b>Behavioral health primary care</b>											
Within 24 hours	1%	0%	0%	0%	0%	0%	*	*	*	*	0%
Within 7 days	1%	1%	2%	1%	0%	0%	1%	1%	1%	1%	1%
Within 30 days	2%	10%	11%	1%	1%	1%	1%	5%	1%	8%	3%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
No Referral	96%	89%	87%	98%	99%	99%	97%	94%	98%	91%	95%
<b><i>Mental health specialty care</i></b>											
Within 24 hours	0%	0%	0%	0%	0%	*	*	*	*	*	0%
Within 7 days	1%	0%	0%	1%	0%	0%	2%	0%	1%	0%	1%
Within 30 days	1%	1%	1%	1%	0%	0%	3%	1%	1%	2%	1%
No Referral	97%	99%	98%	98%	99%	100%	94%	99%	98%	98%	98%
<b><i>Audiology</i></b>											
Within 24 hours	0%	*	0%	0%	0%	*	0%	0%	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%	*	1%	0%	0%
Within 30 days	1%	0%	1%	0%	0%	0%	1%	0%	1%	1%	1%
No Referral	99%	100%	99%	100%	100%	100%	98%	99%	98%	99%	99%
<b><i>Cardiology</i></b>											
Within 24 hours	0%	*	*	0%	*	*	0%	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%	*	0%	*	0%
Within 30 days	0%	0%	0%	0%	0%	*	0%	0%	0%	*	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Dental</i></b>											
Within 24 hours	0%	*	0%	*	*	*	*	*	*	*	0%
Within 7 days	0%	*	0%	*	*	*	*	0%	0%	0%	0%
Within 30 days	0%	0%	0%	*	*	*	0%	*	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Dermatology</i></b>											
Within 24 hours	0%	*	0%	0%	*	*	*	*	*	*	0%
Within 7 days	0%	*	0%	*	*	*	0%	*	0%	*	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>ENT</i></b>											
Within 24 hours	*	*	*	*	*	*	*	0%	*	*	0%
Within 7 days	0%	*	0%	0%	*	*	*	*	0%	0%	0%
Within 30 days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>GI</i></b>											

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Within 24 hours	0%	*	*	*	*	*	0%	0%	*	*	0%
Within 7 days	0%	*	0%	0%	*	0%	0%	*	0%	*	0%
Within 30 days	0%	*	0%	0%	*	0%	0%	0%	0%	*	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Internal medicine</b>											
Within 24 hours	0%	*	*	*	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%	*	0%	0%	0%
Within 30 days	0%	*	0%	0%	0%	*	0%	0%	0%	*	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Neurology</b>											
Within 24 hours	0%	*	*	*	*	*	0%	0%	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%	0%	0%	*	0%
Within 30 days	0%	0%	0%	0%	*	0%	1%	0%	1%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	99%	100%	99%	100%	100%
<b>OB/GYN</b>											
Within 24 hours	0%	*	*	*	*	*	*	*	*	0%	0%
Within 7 days	0%	*	*	0%	*	*	0%	*	*	*	0%
Within 30 days	0%	0%	0%	0%	*	*	0%	*	0%	*	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Ophthalmology</b>											
Within 24 hours	0%	*	*	*	*	*	*	*	*	*	0%
Within 7 days	0%	*	0%	*	*	*	0%	*	0%	*	0%
Within 30 days	0%	0%	0%	0%	*	*	0%	*	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Optometry</b>											
Within 24 hours	0%	*	0%	0%	*	*	*	*	*	*	0%
Within 7 days	0%	0%	0%	0%	*	*	0%	*	0%	*	0%
Within 30 days	0%	0%	0%	0%	*	0%	0%	*	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b>Orthopedics</b>											
Within 24 hours	0%	*	*	0%	0%	*	0%	0%	0%	*	0%
Within 7 days	0%	0%	0%	0%	0%	*	0%	*	0%	*	0%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Within 30 days	0%	0%	1%	0%	0%	0%	1%	0%	1%	1%	1%
No Referral	99%	100%	99%	100%	100%	100%	99%	100%	99%	99%	99%
<b><i>Pulmonology</i></b>											
Within 24 hours	0%	*	*	0%	*	*	*	*	*	*	0%
Within 7 days	0%	*	0%	0%	*	0%	0%	*	0%	*	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Urology</i></b>											
Within 24 hours	0%	*	*	*	*	*	*	*	*	*	0%
Within 7 days	0%	0%	*	0%	*	*	0%	*	0%	*	0%
Within 30 days	0%	0%	0%	0%	*	0%	0%	0%	0%	*	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
<b><i>Case manager</i></b>											
Within 24 hours	1%	0%	0%	0%	0%	*	0%	*	0%	0%	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%	0%	0%	*	0%
Within 30 days	0%	0%	0%	0%	*	*	0%	*	0%	0%	0%
No Referral	99%	100%	100%	100%	100%	100%	100%	100%	100%	100%	99%
<b><i>Substance abuse program</i></b>											
Within 24 hours	0%	0%	0%	0%	*	*	0%	*	0%	*	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Within 30 days	0%	0%	0%	0%	0%	*	0%	0%	1%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	99%	100%	99%	100%	100%
<b><i>Health education</i></b>											
Within 24 hours	0%	*	0%	*	*	*	*	*	0%	*	0%
Within 7 days	0%	0%	0%	0%	*	0%	0%	0%	0%	0%	0%
Within 30 days	0%	1%	1%	0%	0%	0%	0%	1%	0%	0%	0%
No Referral	100%	99%	99%	100%	100%	100%	100%	99%	100%	100%	100%
<b><i>Chaplain</i></b>											
Within 24 hours	0%	0%	0%	0%	*	0%	0%	*	0%	0%	0%
Within 7 days	0%	0%	0%	0%	0%	*	0%	0%	0%	*	0%
Within 30 days	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
No Referral	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
<b>Family support, community service</b>											
Within 24 hours	0%	*	0%	0%	*	0%	0%	*	0%	*	0%
Within 7 days	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
Within 30 days	0%	1%	1%	0%	0%	0%	1%	1%	1%	1%	0%
No Referral	100%	99%	99%	100%	100%	100%	99%	99%	98%	99%	99%
<b>Military OneSource</b>											
Within 24 hours	0%	0%	0%	0%	0%	0%	*	*	0%	0%	0%
Within 7 days	0%	1%	1%	0%	0%	0%	1%	0%	3%	1%	1%
Within 30 days	2%	10%	7%	0%	2%	2%	1%	5%	2%	5%	3%
No Referral	98%	89%	92%	99%	98%	98%	98%	95%	94%	94%	96%
<b>Other</b>											
Within 24 hours	1%	0%	0%	0%	0%	0%	0%	0%	0%	*	0%
Within 7 days	2%	2%	1%	0%	0%	0%	1%	1%	3%	1%	1%
Within 30 days	3%	0%	1%	1%	1%	0%	2%	0%	2%	1%	2%
No Referral	95%	98%	99%	99%	99%	100%	97%	99%	95%	99%	97%
<b>11. SM was provided with:</b>											
<b>Health education information</b>											
Not checked	30%	4%	11%	67%	55%	8%	18%	4%	15%	4%	26%
Checked	70%	96%	89%	33%	45%	92%	82%	96%	85%	96%	74%
<b>Health care benefits information</b>											
Not checked	66%	30%	34%	86%	69%	42%	63%	32%	64%	31%	59%
Checked	34%	70%	66%	14%	31%	58%	37%	68%	36%	69%	41%
<b>Appointment assistance</b>											
Not checked	91%	95%	91%	89%	96%	99%	83%	96%	93%	92%	91%
Checked	9%	5%	9%	11%	4%	1%	17%	4%	7%	8%	9%
<b>Member declined to complete form</b>											
Not checked	100%	100%	100%	100%	100%	100%	100%	100%	99%	100%	100%
Checked	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%
<b>Member declined interview</b>											
Not checked	100%	100%	100%	96%	97%	99%	99%	99%	100%	100%	99%
Checked	0%	0%	0%	4%	3%	1%	1%	1%	0%	0%	1%
<b>Member declined referral</b>											

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Not checked	98%	91%	93%	92%	94%	95%	95%	92%	94%	92%	95%
Checked	2%	9%	7%	8%	6%	5%	5%	8%	6%	8%	5%
<b>LOD</b>											
Not checked	100%	76%	73%	99%	99%	99%	100%	89%	99%	80%	94%
Checked	0%	24%	27%	1%	1%	1%	0%	11%	1%	20%	6%
<b>Other</b>											
Not checked	100%	96%	97%	98%	98%	99%	96%	97%	96%	98%	98%
Checked	0%	4%	3%	2%	2%	1%	4%	3%	4%	2%	2%
<b>12. Referral was made to:</b>											
<b>Military treatment facility</b>											
Not checked	81%	99%	99%	89%	93%	96%	83%	98%	92%	99%	89%
Checked	19%	1%	1%	11%	7%	4%	17%	2%	8%	1%	11%
<b>Division/Line-based medical resource</b>											
Not checked	98%	100%	100%	100%	100%	100%	99%	100%	92%	100%	98%
Checked	2%	0%	0%	0%	0%	0%	1%	0%	8%	0%	2%
<b>VA</b>											
Not checked	99%	77%	72%	100%	98%	99%	100%	86%	99%	77%	93%
Checked	1%	23%	28%	0%	2%	1%	0%	14%	1%	23%	7%
<b>Vet center</b>											
Not checked	100%	92%	91%	100%	100%	100%	100%	95%	100%	92%	98%
Checked	0%	8%	9%	0%	0%	0%	0%	5%	0%	8%	2%
<b>TRICARE</b>											
Not checked	99%	99%	98%	100%	100%	100%	99%	99%	99%	98%	99%
Checked	1%	1%	2%	0%	0%	0%	1%	1%	1%	2%	1%
<b>Contract support</b>											
Not checked	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Checked	0%	*	0%	0%	*	*	0%	0%	0%	0%	0%
<b>Community service</b>											
Not checked	100%	99%	99%	100%	100%	100%	99%	99%	99%	99%	99%
Checked	0%	1%	1%	0%	0%	0%	1%	1%	1%	1%	1%
<b>Other</b>											
Not checked	98%	95%	95%	98%	99%	99%	95%	97%	91%	96%	96%

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Questions in clinician portion of DD 2900	Army Active Duty	Army Reserve	Army National Guard	Air Force Active Duty	Air Force Reserve	Air National Guard	Navy Active Duty	Navy Reserve	Marine Active Duty	Marine Forces Reserve	All
Sample size	76663	16010	25847	24168	2397	6220	7667	3143	28541	4606	195262
Checked	2%	5%	5%	2%	1%	1%	5%	3%	9%	4%	4%
<i>None</i>											
Not checked	23%	30%	36%	16%	11%	7%	23%	21%	23%	31%	24%
Checked	77%	70%	64%	84%	89%	93%	77%	79%	77%	69%	76%

*\*These variables were created to summarize the individual items. These indices were created to reflect specific areas (e.g., SM concerns) and components (e.g., clinician concerns) within the PDHRA. They either reflect counts of individual items or the presence or absence of a concern. See the methodology chapter for further detail.*

*\*\*Note: Asterisks indicate that there were no SMs endorsing the response.*

## **Appendix O: PDHRA Problem Areas for SMs Receiving and Not Receiving Medical Referrals**

**O.1 Mean Number of Items Endorsed by Problem Area on the PDHRA for SMs Receiving or not Receiving Medical Referrals**

Characteristics	Active and Reserve Service Members								Active Service Members							
	SM Reporting Problems and Receiving Medical Referral				SM Reporting Problems and Not Receiving Medical Referral				SM Reporting Problems and Receiving Medical Referral				SM Reporting Problems and Not Receiving Medical Referral			
	N=36,074				N=115,177				N=21,161				N=81,998			
	Mean	Std	Min	Max	Mean	Std	Min	Max	Mean	Std	Min	Max	Mean	Std	Min	Max
<b>SM Reported Problems</b>																
1-8. General health history	3.14	1.87	0	7	1.84	1.88	0	7	2.95	1.87	0	7	1.73	1.79	0	7
8a. Physical health concerns	3.20	3.60	0	20	1.31	2.65	0	20	2.85	3.38	0	20	1.15	2.39	0	20
10a. Exposure concerns	2.39	3.73	0	19	1.47	3.06	0	19	2.08	3.48	0	19	1.34	2.91	0	19
9d. TBI symptoms	1.16	1.76	0	7	0.53	1.30	0	7	1.17	1.69	0	7	0.49	1.21	0	7
11. Relationship conflict (single item)	1.11	1.39	0	4	0.54	1.07	0	4	0.98	1.34	0	4	0.46	0.99	0	4
12. PTSD symptoms	0.35	0.67	0	2	0.16	0.48	0	2	0.36	0.68	0	2	0.16	0.47	0	2
13. Alcohol problems	0.55	0.50	0	1	0.57	0.50	0	1	0.56	0.50	0	1	0.59	0.49	0	1
14. Depressive symptoms	0.39	0.49	0	1	0.20	0.40	0	1	0.38	0.48	0	1	0.20	0.40	0	1
15-18. Requests for support	0.86	1.06	0	4	0.22	0.62	0	4	0.67	0.96	0	4	0.19	0.58	0	4
Overall PDHRA	4.53	2.01	1	9	2.73	1.85	1	9	4.28	2.03	1	9	2.63	1.79	1	9
Any SM self-reported problems	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	1	1	1.00	0.00	1	1
<b>Clinician Risk Assessment: SM response to interview questions</b>																
2a. SM thought about harm self (past month)	0.02	0.15	0	1	0.01	0.08	0	1	0.02	0.13	0	1	0.00	0.06	0	1
2b. SM thought about harm other (since deployment)	0.08	0.27	0	1	0.02	0.14	0	1	0.06	0.25	0	1	0.01	0.11	0	1
<b>Clinician Risk Assessment: Clinician judgment</b>																
3a. SM current risk for harm self/other	0.02	0.16	0	1	0.00	0.06	0	1	0.02	0.15	0	1	0.00	0.06	0	1

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Characteristics	Active and Reserve Service Members								Active Service Members							
	SM Reporting Problems and Receiving Medical Referral				SM Reporting Problems and Not Receiving Medical Referral				SM Reporting Problems and Receiving Medical Referral				SM Reporting Problems and Not Receiving Medical Referral			
	N=36,074				N=115,177				N=21,161				N=81,998			
	Mean	Std	Min	Max	Mean	Std	Min	Max	Mean	Std	Min	Max	Mean	Std	Min	Max
<b>3b. Risk assessment referral indicated</b>	0.10	0.30	0	1	0.01	0.12	0	1	0.09	0.29	0	1	0.01	0.11	0	1
<b>4. Alcohol screening result</b>	0.44	0.50	0	1	0.41	0.49	0	1	0.46	0.50	0	1	0.41	0.49	0	1
<b>4. Alcohol PCM referral indicated</b>	0.23	0.42	0	1	0.11	0.32	0	1	0.24	0.43	0	1	0.13	0.33	0	1
<b>5. TBI risk assessment</b>	0.28	0.45	0	1	0.15	0.35	0	1	0.30	0.46	0	1	0.14	0.34	0	1
<b>5. TBI referral indicated</b>	0.17	0.38	0	1	0.03	0.17	0	1	0.16	0.37	0	1	0.03	0.17	0	1
<b>Clinician Major Concerns</b>																
<b>Number of major concerns</b>	0.78	1.16	0	9	0.23	0.70	0	9	0.62	0.98	0	8	0.16	0.52	0	7
<b>Clinician major concern: any</b>	0.44	0.50	0	1	0.14	0.35	0	1	0.38	0.49	0	1	0.12	0.32	0	1
<b>7. Physical symptom(s)</b>	0.31	0.46	0	1	0.10	0.30	0	1	0.25	0.43	0	1	0.08	0.27	0	1
<b>7. Exposure symptom(s)</b>	0.04	0.19	0	1	0.01	0.10	0	1	0.03	0.16	0	1	0.01	0.08	0	1
<b>7. Depression symptom(s)</b>	0.10	0.30	0	1	0.03	0.16	0	1	0.09	0.28	0	1	0.02	0.13	0	1
<b>7. PTSD symptoms</b>	0.13	0.34	0	1	0.04	0.19	0	1	0.10	0.30	0	1	0.02	0.14	0	1
<b>7. Anger/Aggression symptoms</b>	0.05	0.21	0	1	0.01	0.09	0	1	0.04	0.19	0	1	0.01	0.08	0	1
<b>7. Suicidal ideation</b>	0.01	0.07	0	1	0.00	0.04	0	1	0.00	0.05	0	1	0.00	0.02	0	1
<b>7. Social/family conflict</b>	0.08	0.26	0	1	0.02	0.15	0	1	0.06	0.23	0	1	0.02	0.12	0	1
<b>7. Alcohol use</b>	0.04	0.20	0	1	0.01	0.11	0	1	0.04	0.19	0	1	0.01	0.09	0	1
<b>7. Other</b>	0.03	0.16	0	1	0.01	0.09	0	1	0.03	0.16	0	1	0.01	0.08	0	1
<b>Referrals</b>																
<b>8. Number of referrals</b>	1.57	0.89	1	11	0.16	0.41	0	5	1.51	0.85	1	11	0.14	0.39	0	5
<b>Already under care (y/n)</b>	0.30	0.46	0	1	0.25	0.43	0	1	0.33	0.47	0	1	0.20	0.40	0	1

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Characteristics	Active and Reserve Service Members								Active Service Members							
	SM Reporting Problems and Receiving Medical Referral				SM Reporting Problems and Not Receiving Medical Referral				SM Reporting Problems and Receiving Medical Referral				SM Reporting Problems and Not Receiving Medical Referral			
	N=36,074				N=115,177				N=21,161				N=81,998			
	Mean	Std	Min	Max	Mean	Std	Min	Max	Mean	Std	Min	Max	Mean	Std	Min	Max
No care (y/n)	0.61	0.49	0	1	0.19	0.39	0	1	0.54	0.50	0	1	0.18	0.38	0	1
Care not applicable (y/n)	0.09	0.28	0	1	0.56	0.50	0	1	0.14	0.34	0	1	0.62	0.49	0	1
Any referral	1.00	0.00	1	1	0.14	0.35	0	1	1.00	0.00	1	1	0.13	0.33	0	1
Any medical referral	1.00	0.00	1	1	0.00	0.00	0	0	1.00	0.00	1	1	0.00	0.00	0	0
8. Primary care	0.75	0.43	0	1	0.00	0.00	0	0	0.67	0.47	0	1	0.00	0.00	0	0
8. Behavioral care	0.38	0.49	0	1	0.00	0.00	0	0	0.35	0.48	0	1	0.00	0.00	0	0
8. Specialty physical care	0.13	0.33	0	1	0.00	0.00	0	0	0.18	0.38	0	1	0.00	0.00	0	0
8. Military OneSource	0.11	0.31	0	1	0.03	0.18	0	1	0.08	0.27	0	1	0.02	0.15	0	1
8. Other non-medical care	0.12	0.32	0	1	0.05	0.22	0	1	0.15	0.36	0	1	0.06	0.24	0	1
11. SM declined referral	0.02	0.15	0	1	0.07	0.26	0	1	0.02	0.15	0	1	0.05	0.22	0	1
Health Care Encounters																
Health Care Encounters 6 weeks before PDHRA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.11	2.31	0	33	1.05	2.28	0	50
Health Care Encounters 6 weeks after PDHRA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.31	3.24	0	81	1.54	2.59	0	94
Proportion of SMs having HCE 6 weeks before PDHRA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.38	0.49	0	1	0.37	0.48	0	1
Proportion of SMs having HCE 6 weeks after PDHRA	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.70	0.46	0	1	0.57	0.49	0	1

## **Appendix P: Comparing Alcohol and TBI on Old and New Versions of the PDHRA**

### Increased positive alcohol screenings on 2008 version of the DD Form 2900 do not lead to more substance abuse referrals.

Table P.1 compares results of the alcohol screening for the 2005 and 2008 versions of the DD Form 2900. In the 2005 version, a positive alcohol screening was indicated by a positive response to either question 10a or 10b. The 2008 version includes three additional questions about alcohol from the AUDIT-C scale. Comparing the two forms using just the first two questions that are in both versions, a similar percentage of SMs met the positive screening criteria. On the new version, a positive screen was indicated by a positive response to 13a or 13b, or if the summed score for 13c thru 13e (responses range from zero to four for each question) was greater or equal to four for men and three for women (see algorithm in Air Force Manual in Appendix J). These additional criteria greatly increased the percentage of SMs screening positive for alcohol (42.4%) on the 2008 version--nearly a four fold increase in positive screenings compared to the 2005 version.

It is not possible to determine the reason for this substantial increase from the secondary analysis of DD Form 2900s. It may be that the 2008 version is accurately capturing SMs with alcohol problems that were missed in the 2005 version. However, this is not consistent with the low corresponding rates of major concerns and referrals. It is possible that SMs' opposition to being identified as needing a referral may affect clinicians' judgment about the problem and making a referral. On the other hand, it may be that the 2008 version is too sensitive and is over-identifying (i.e., indicating a problem where none really exists). In this case, clinicians may not consider a positive self-report screen to truly indicate a potential alcohol problem.

**Table P.1. Comparing percentage of positive alcohol screening results on 2005 (N=438,368) and 2008 version (N=195,262) of the PDHRA.**

	Percent of Positive Responses					
	Used more than meant to <sup>1</sup>	Needed to cut down <sup>2</sup>	Alcohol Problem Old <sup>3</sup>	Potential Alcohol Problem New <sup>4</sup>	Alcohol Major Concern <sup>5</sup>	Substance Abuse Referral <sup>6</sup>
<b>2005 version</b>	8.8	8.2	11.6	NA	0.8	0.3
<b>2008 version</b>	7.3	6.7	9.5	42.4	1.5	0.4

<sup>1</sup>Question 10a on 2005 version; question 13a on 2008 version.

<sup>2</sup>Question 10b on 2005 version; question 13b on 2008 version.

<sup>3</sup>If yes to either 10a or 10b (or 13a or 13b on new version) then positive.

<sup>4</sup>For Q13, a positive score is indicated by a positive score to either 13a or 13b or if their scores (ranging from 0-4 for each question) for 13c+13d+13e are  $\geq 4$  for men or  $\geq 3$  for women.

<sup>5</sup>If the clinician marked a major concern alcohol in question 5 (2005 version) or question 7 (2008 version).

<sup>6</sup>Question 6h (clinician section) 2005 version; question 8f (clinician section) 2008 version.

If clinician judgment is taken as a criterion, then the percentage of clinician concerns about alcohol and referrals to a substance abuse program supports the hypothesis that the new form is over-identifying alcohol problems. In the 2008 version, 1.5% of clinicians reported a major alcohol concern, compared to just under 1% in the 2005 version. This is only a slight increase, and does not match the dramatic increase in positive screenings. Furthermore, referrals for substance abuse were nearly identical. Thus, while positive screenings for alcohol dramatically

increased with the 2008 version, clinician concerns only slightly increased, and referrals to a substance abuse program were nearly identical.

### **Additional TBI questions did not increase referrals on the 2008 version of the DD Form 2900**

The 2008 version of the DD Form 2900 included four new questions (9a-9d) designed to identify potential cases of traumatic brain injury (TBI). There were no questions specific to TBI on the 2005 version of the DD Form 2900. Therefore, we examined whether there were any differences in a range of related concerns, including physical, PTSD, and depressive symptoms. Table P.2 compares the percentage of SM self-reported symptoms and clinician concerns for the areas of physical symptoms, PTSD, and depression, between the 2005 and 2008 versions of the DD Form 2900. In addition, related referrals are presented.

**Table P.2. Comparing percentage of positive responses for TBI-related self-reported symptoms, clinician concerns, and referrals on the 2005 (N=438,368) and 2008 (N=195,262) versions of the DD Form 2900.**

	Percent of Positive Responses								
	SM Self-report				Clinician Report				
					Major Concern			Referral	
	Physical Symptom <sup>1</sup>	PTSD <sup>2</sup>	Depression <sup>3</sup>	TBI <sup>4</sup>	Physical <sup>5</sup>	PTSD <sup>5</sup>	Depression <sup>5</sup>	Medical <sup>6</sup>	Any <sup>7</sup>
<b>2005 version</b>	39.3	30.3	10.5	NA	13.7	4.8	3.2	21.2	35.6
<b>2008 version</b>	33.1	24.3	10.2	14.3	12.0	4.6	3.4	18.8	27.9

<sup>1</sup>Question 6a on 2005 version; question 8a on 2008 version.

<sup>2</sup>Questions 9a-9d on 2005 version; question 12a-12d on 2008 version.

<sup>3</sup>Questions 11a and 11b on 2005 version; questions 14a and 14b on 2008 version.

<sup>4</sup>If yes to any item on 9d in the 2008 version.

<sup>5</sup>If the clinician marked a major concern for the specific problem area in question 5 (2005 version) or question 7 (2008 version).

<sup>6</sup>Question 6b-6f (clinician section) 2005 version; question 8a-8d (clinician section) 2008 version.

<sup>7</sup>Any positive response to question 6 (clinician section) 2005 version, or question 8 (2008) version. For both versions, this includes declined referrals, even when no specific referral was marked by the clinician.

The percentage of SMs reporting physical health or PTSD symptoms were both lower on the 2008 version compared to the 2005 version (percent differences of -10.4% and -6.0% respectively). A similar percentage of SMs (10%) screened positive for depression on both versions. With the addition of the new questions, 14% of SMs self-reported TBI symptoms on the 2008 version. There is no way to know whether the decreases observed in reporting of physical health or PTSD symptoms were due to fewer symptoms actually experienced by SMs or whether the addition of new and related questions about TBI may account for some of the decreases.

The level of problems reported on the PDHRA may also be influenced by the level of combat operations, which is not constant, but changes over time. Table P.3 shows the percentage of SMs reporting combat exposure on the PDHA depending on the year they returned from theater. This percentage has decreased since 2005. A decrease in combat exposure may contribute to the

observed decrease the number of symptoms reported on the PDHRA. However, we can not distinguish differences due to changes in combat operations from changes due to revisions in the form itself.

**Table P.3. Combat exposure reported on the PDHA for SMs departing theater since 2005.**

Year departed theater	Combat Exposure*					
	variable missing		0=NO		1=YES	
	N**	Percent	N**	Percent	N**	Percent
<b>2005</b>	2	0%	1758	34%	3435	66%
<b>2006</b>	20	0%	87945	40%	129409	60%
<b>2007</b>	47	0%	75995	40%	114061	60%
<b>2008</b>	3449	1%	115805	50%	114095	49%
<b>2009</b>	1226	2%	29552	58%	20154	40%

\* Combat exposure is defined as a 'yes' response to any of questions 7-9 on the 2003 PDHA or questions 10-12 on the 2008 PDHA.

\*\* The sample included in this table consists of all 2003 and 2005 PDHAs for SMs departing theater since 2005 (430 SMs who departed before 2005 are not included). If there were multiple completions for a single deployment (defined as departure dates within 90 days of each other), one form was randomly selected to include in the data set, but SMs could be in the data multiple times for multiple deployments. In most of this report SMs were included in the data set only once, but here we allowed SMs to be included more than once because we were interested in combat exposure over time, not individual SMs. In addition to differences between the forms, other factors that are difficult to measure could impact SM reporting such as the level of combat operations or efforts to reduce stigma.

Despite the lower percentage of SMs with self-reported physical or PTSD symptoms, the percentage of clinicians with major concerns in these areas was nearly the same for the 2005 and 2008 versions. Because there is no option for “TBI concern” on the 2005 form, clinicians may have indicated concerns in this area under physical, PTSD, or depression concerns. The percentage of SMs who received one or more medical referrals, or any referral at all, was slightly lower on the 2008 version compared to the 2005 version. One type of medical specialty referral, to neurology, was available on the 2008 version only. Very few (0.4%) of SMs received a neurology referral (not shown in table). From the data available, there is no way to know why the referral rates have decreased.

In summary, compared to the 2005 version, fewer SMs reported physical, PTSD, or depressive symptoms on the 2008 DD Form 2900, but clinician concerns for these areas were very similar. The overall rate of referrals decreased when comparing SMs who completed the 2008 version compared to the 2005 version. Thus, the additional TBI questions in the 2008 version of the DD Form 2900 did not increase overall referral rates.

## **Appendix Q: Service Member Survey Codebook**

Today's Date: \_\_\_\_\_

Location Code: \_\_\_\_\_

**Instructions:** This study is being conducted by Vanderbilt University, which has been contracted by the DoD to provide an evaluation of the post-deployment health re-assessment process (PDHRA). Your opinions and experience will help the military improve health care for all Service Members. This questionnaire will take about 15 minutes or less to finish, and your participation is voluntary. You can skip any questions or refuse to answer any questions. Your answers will remain confidential and will not be connected to who you are.

The PDHRA is a medical screening for both behavioral health and physical health concerns. It is to help you access resources for any concerns you may have about your health after returning from deployment. The PDHRA consists of a self-report questionnaire called the DD Form 2900 and speaking one-on-one with a health care provider. The PDHRA typically occurs 90 – 180 days after returning from deployment.

Age	Gender	Grade / Rank
_____ 18-24	_____ Male	_____ E1-E4
_____ 25-29	_____ Female	_____ E5-E6
_____ 30-39		_____ E7-E9
_____ 40 or over		_____ O1-O3
		_____ O4-O9
		_____ W01-W05

Please fill in the blank with a number from 0 to 100%.

ADSM01S

1. What percentage of the Service Members returning from OIF/OEF would you estimate have symptoms of Post-traumatic Stress Disorder (PTSD)? \_\_\_\_\_ %

ADSM02S

2. What percentage of the Service Members returning from OIF/OEF would you estimate received a deployment-related concussion? \_\_\_\_\_ %

**For the remainder of the questionnaire, please mark your answers by putting an 'X' in one box for each numbered item.** If you would like to change an answer you already marked, please fill in the entire box of the incorrect answer and mark the appropriate answer with an 'X'. **Only answers with an 'X' will be recorded.**

Mark 'Yes' or 'No' for each of the following questions.

ADSM03

3. At least one NCO or Officer from my current unit was in theater with me on my last deployment

Yes ☐ No ☐

ADSM04

4. At least one unit NCO or Officer briefed my unit on the PDHRA

Yes ☐ No ☐

ADSM05

5. Are you planning to separate from the military in the next 6 months?

Yes ☐ No ☐

ADSM06

6. Are you seeking promotion within the military in the next 6 months?

Yes ☐ No ☐

The following questions are about any deployment cycle education you may have received to help Service Members reintegrate post-deployment. The education may be written materials, websites, films, or videos that provide information on the kinds of problems that Service Members might face post-deployment.

For question 7, please mark 'Yes' or 'No' in the 1st column, and if YES, please indicate if the materials were "Helpful" or Not Helpful" in the 2<sup>nd</sup> column.

7. To help you reintegrate post-deployment, did you

ADSM7A a. Read any written materials?

Yes ☐ No ☐

If YES, was the material helpful?

Helpful ☐ Not Helpful ☐

ADSM7B b. View any websites?

Yes ☐ No ☐

Helpful ☐ Not Helpful ☐

ADSM7C c. See a film or video not on the Web?

Yes ☐ No ☐

Helpful ☐ Not Helpful ☐

ADSM7D

ADSM7E

ADSM7F

*How much do you DISAGREE or AGREE with the statements below...*

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
ADSM08	8. I am willing to tell others my distressing thoughts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM09	9. I have problems that I <i>can't</i> discuss with family or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM10	10. If I thought I needed it, I would get psychological counseling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM11	11. People at home just <i>don't</i> understand what I have been through while in the Armed Forces	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM12	12. I admire people who solve their own problems <i>without</i> seeking professional help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM13	13. If something unpleasant happens to me, I often look for someone to talk to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM14	14. Among my friends or relatives, there is someone who makes me feel better if I am feeling down	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM15	15. If I feel depressed or sad, I tend to keep those feelings to myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM16	16. There are people to whom I can talk about my deployment experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM17	17. If I were feeling upset or down for a long time I would want to get help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM18	18. People rarely talk to me about their personal problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM19	19. I am carefully listened to and understood by family members or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM20	20. I prefer <i>not</i> to talk about my problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM21	21. I am aware of my moods and feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM22	22. I <i>don't</i> allow my feelings to influence my decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM23	23. Among my friends or relatives, there is someone I go to if I need good advice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM24	24. Emotional problems are more likely to be solved with professional help than by trying to solve them alone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM25	25. I can spot the signs of post-traumatic stress (PTSD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM26	26. I can spot the signs of depression	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM27	27. I can spot the signs of a concussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM28	28. I know what to look for to determine if someone is drinking too much alcohol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*How much do you DISAGREE or AGREE with the statements below, about your military job...*

ADSM29	29. The members of my unit know that they can depend on each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM30	30. If I were stressed or feeling down someone in my unit would be supportive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM31	31. If I had an emotional or family problem someone in my unit would figure out a way to help me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*How much do you DISAGREE or AGREE with the statements below...*

	<i>My unit NCO...</i>	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
ADSM32	32. Makes sure that there is time to attend appointments for physical, mental, or dental health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM33	33. Encourages unit members to be open about any problems they might be experiencing on the DD Form 2900	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM34	34. Strongly supports the PDHRA process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM35	35. Has <b>no</b> compassion for unit members experiencing emotional or family problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM36	36. Has talked about his or her own service-related mental health problems or treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM37	37. My answers to the above questions would be the same for my unit officer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*If I were to reveal any emotional or mental health problems on a PDHRA it is likely that...*

ADSM38	38. I could be denied a security clearance in the future	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM39	39. It would assist me in finding the help I need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM40	40. It could harm my career	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM41	41. Members of my unit would have less confidence in me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM42	42. My unit leadership would have doubts about my dependability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*Being referred to a mental health provider would NOT be helpful because...*

ADSM43	43. It would be too hard to get time off work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM44	44. It would cost too much money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM45	45. The visit would <b>not</b> remain confidential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM46	46. The services provided are <b>not</b> effective	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM47	47. The medications that I might be given have too many bad side effects	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM48	48. Religious counseling would be more helpful than mental health treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM49	49. I can handle problems on my own or with help from family or friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ADSM50 50. Since returning from your last deployment have you experienced an emotional, alcohol, stress, or family problem? Yes ☐ No ☐

*If no, skip to question #51 If yes, have you talked to any of the following individuals about it?*

ADSM50A	50a. Medical Professional	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ADSM50B	50b. Mental Health Professional	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ADSM50C	50c. Religious or spiritual leader	Yes <input type="checkbox"/>	No <input type="checkbox"/>
ADSM50D	50d. Family or friend	Yes <input type="checkbox"/>	No <input type="checkbox"/>

ADSM51 51. Have any friends or family suggested that you seek help from a professional (such as a counselor, doctor, clergy, etc.) for an emotional, alcohol, stress, or family problem? Yes ☐ No ☐

The following questions ask about your experience completing the PDHRA process. It is important to know the degree to which Service Members disclose information on the PDHRA so that we can understand how to improve the process. Remember, your answers will not be linked to your name so your responses will remain confidential.

ADSM52 52. Have you completed the PDHRA since your last deployment? ADSM52C ADSM52D  
 Yes, on a computer ☐ Yes, on the telephone ☐ Yes, using paper and pencil ☐ No ☐

If no, skip to question #69  
 ADSM52A ADSM52B

ADSM53 53. Where were you when you completed the PDHRA (DD Form 2900)?  
 ADSM53A I was by myself ☐ I was in a group where others were also completing the form ☐ ADSM53B

ADSM54 54. When I completed the PDHRA (DD Form 2900) I was... On duty ☐ Off duty ☐  
 ADSM54A ADSM54B

How much do you DISAGREE or AGREE with the statements below...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
ADSM55 55. Completing DD Form 2900 helped me identify my concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

On the self-report questionnaire (DD Form 2900) I fully disclosed...

ADSM56 56. Any problems or concerns about my physical health ☐ ☐ ☐ ☐ ☐

ADSM57 57. Any problems or concerns about my emotional health ☐ ☐ ☐ ☐ ☐

ADSM58 58. Any problems or concerns about alcohol use ☐ ☐ ☐ ☐ ☐

ADSM59 59. After completing DD Form 2900, did you complete a one-on-one interview with a health care provider?  
 Yes, by telephone ☐ Yes, in person ☐ No ☐ ADSM59C  
 ADSM59A ADSM59B

If no, skip to question #69

How much do you DISAGREE or AGREE with the statements below...

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
ADSM60 60. The provider who did the PDHRA interview showed interest and concern for my well-being	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM61 61. The provider reviewed my health in adequate detail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM62 62. The provider seemed out of touch with what it is like to be deployed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM63 63. I felt the provider could help me get access to the care I need	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM64 64. The provider helped me be more aware of my problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM65 65. I felt a great deal of trust in the provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ADSM66 66. I learned a lot from the provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ADSM67 67. Did you know the provider who did the PDHRA interview before this contact? Yes ☐ No ☐

ADSM67A 67a If yes, was the provider associated with your unit when you were deployed? Yes ☐ No ☐

ADSM68 68. How long was the PDHRA interview?  
 Less than 5 minutes ☐ 5 – 10 minutes ☐ 11 – 15 minutes ☐ 16 – 25 minutes ☐ 26 minutes or more ☐

ADSM69 69. Did you know that current DoD policy no longer requires military personnel to disclose service-related mental health treatment when applying for security clearance? Yes ☐ No ☐

## **Appendix R: SM Survey Scale Items**

The survey items included in each scale are listed below. The number in parentheses indicates the item number on the survey (see Appendix L, SM survey). The text is a shortened version of the question.

- Scale 1: Post-deployment Support and Help Seeking (st. alpha=.77). This scale measure the levels of support participants have from family and friends, and their attitudes toward and willingness to seek help, specifically for psychological problems.
  - (9) I have problems that I can't discuss with family or friends
  - (11) People at home just don't understand what I have been through while in the Armed Forces
  - (14) Among my friends or relatives, there is someone who makes me feel better when I am feeling down
  - (16) There are people to whom I can talk about my deployment experience
  - (19) I am carefully listened to and understood by family members or friends
  - (23) Among my friends or relatives, there is someone I go to when I need good advice
  - (10) If I thought I needed it, I would get psychological counseling
  - (12) I admire people who solve their own problems without seeking professional help
  - (17) If I were feeling upset or down for a long time I would want to get help
  - (24) Emotional problems are more likely to be solved with professional help than by trying to solve them alone
- Scale 2: Unit Cohesion for Personal Problems (st. alpha=.88). This scale measures the level of support participants feel within their unit for their personal problems.
  - (29) The members of my unit know that they can depend on each other
  - (30) If I were stressed or feeling down someone in my unit would be supportive
  - (31) If I had an emotional or family problem someone in my unit would figure out a way to help me
- Scale 3: PDHRA Leadership Support (st. alpha=.77). This scale measures participant' perceptions of NCO support for taking care of health problems and encouraging openness and embracing the PDHRA process. It also assesses how open the NCO has been about his/her own problems or willingness to support unit members' problems.
  - (32) Unit NCO makes sure that there is time to attend appointments for physical, mental, or dental health
  - (33) Unit NCO encourages unit members to be open about any problems they might be experiencing on the DD Form 2900
  - (34) Unit NCO strongly supports the PDHRA process
  - (35) Unit NCO has no compassion for unit members experiencing emotional or family problems
  - (36) Unit NCO has talked about his or her own service-related mental health problems or treatment

- Scale 4: PDHRA Self Disclosure (st.  $\alpha=.90$ ). This scale indicates participants' willingness to disclose fully physical, emotional, and alcohol problems on the DD Form 2900.
  - (56) Any problems or concerns about my physical health
  - (57) Any problems or concerns about emotional health
  - (58) Any problems or concerns about alcohol use
- Scale 5: Satisfaction with the PDHRA Provider (st.  $\alpha=.87$ ). This scale measures participants' satisfaction with the PDHRA provider, including issues of attention, time, and trust.
  - (60) The provider who did the PDHRA interview showed interest and concern for my well-being
  - (61) The provider reviewed my health in adequate detail
  - (62) The provider seemed out of touch with what it is like to be deployed
  - (63) I felt the provider could help me get access to the care I need
  - (64) Provider helped me be more aware of my problems
  - (65) I felt a great deal of trust in the provider
  - (66) I learned a lot from my provider
- Scale 6: Awareness of Others' Problems (st.  $\alpha=.77$ ). This scale measures how aware participants are of others' problems specific to common post-deployment symptoms (e.g., PTSD depression, concussion, alcohol abuse).
  - (25) I can spot the signs of PTSD
  - (26) I can spot the signs of depression.
  - (27) I can spots the signs of a concussion.
  - (28) I know what to look for to determine if someone is drinking too much alcohol.
- Scale 7: General Willingness to self-disclose (st.  $\alpha=.75$ ). This scale measures how willing someone is to disclose problems to others rather than keeping them to one self.
  - (13) When something unpleasant happens to me, I often look for someone to talk to
  - (15) When I feel depressed or sad, I tend to keep those feelings to myself
  - (20) I prefer not to talk about my problems
  - (8) I am willing to tell others my distressing thoughts
- Scale 8: Perceived Stigma Related to Disclosure (st.  $\alpha=.88$ ). This scale assesses perceptions of stigma associated with disclosing emotional or mental health problems on the PDHRA.
  - (38) I could be denied a security clearance in the future.
  - (40) It could harm my career.
  - (41) Members of my unit would have less confidence in me.
  - (42) My unit leadership would have doubts about my dependability.
- Scale 9: Barriers to Accepting Mental Health Referral (st.  $\alpha=.80$ ). This scale measures the barriers to seeking mental health treatment through the PDHRA. High perceived levels of barriers may lead to lower disclosure due to lack of trust in receiving treatment.
  - (43) It would be too hard to get time off work.
  - (44) It would cost too much money.

- (45) The visit would not remain confidential.
- (46) The services provided are not effective.
- (47) The medications that I might be given have too many bad side effects.
- (48) Religious counseling would be more helpful than mental health treatment.
- (49) I can handle problems on my own or with help from my family or friends.

## **Appendix S: SM Survey Item Descriptives**

**Table S.1. SM Survey Item Descriptives**

<b>Questions in SM Survey</b>		<b>N=6,714</b>
<b>Age</b>		
Missing		0%
18-24		38%
25-29		26%
30-39		24%
40 or over		12%
<b>Gender</b>		
Missing		3%
Male		89%
Female		8%
<b>Grade or Rank</b>		
Missing		3%
E1-E4		50%
E5-E6		31%
E7-E9		7%
O1-O3		6%
O4-O9		2%
W01-W05		1%
<b>1. Percentage of SMs returning from OIF/OEF with PTSD symptoms</b>		
N		6211
Mean		38.65
Std		26.66
Median		35
Range		100
<b>2. Percentage of SMs returning from OIF/OEF with deployment-related concussion</b>		
N		6295
Mean		26.04
Std		22.33
Median		20
Range		100
<b>3. At least one NCO or Officer was in theater on last deployment</b>		
Missing		1%
Yes		82%
No		17%
<b>4. At least one unit NCO or Officer briefed unit on PDHRA</b>		
Missing		1%
Yes		85%
No		13%
<b>5. Planning to separate from military in the next 6 months</b>		
Missing		1%
Yes		11%

Questions in SM Survey	N=6,714
No	88%
<b>6. Seeking promotion in the military in the next 6 months</b>	
Missing	1%
Yes	55%
No	44%
<b>7. To help you reintegrate post-deployment, did you:</b>	
<b>7a. Read written materials</b>	
Missing	1%
Yes	56%
No	42%
<b>7a. Written materials were helpful</b>	
Missing	44%
Helpful	48%
Not Helpful	9%
<b>7b. Viewed websites</b>	
Missing	4%
Yes	34%
No	62%
<b>7b. Websites were helpful</b>	
Missing	58%
Helpful	29%
Not Helpful	13%
<b>7c. Saw a video or film not on the web</b>	
Missing	1%
Yes	55%
No	43%
<b>7c. Film and videos were helpful</b>	
Missing	44%
Helpful	43%
Not Helpful	13%
<b>8. Willing to tell others distressing thoughts</b>	
Missing	2%
Strongly Disagree	5%
Disagree	13%
Neither Agree nor Disagree	26%
Agree	45%
Strongly Agree	9%
<b>9. Have problems that can't discuss with family or friends</b>	
Missing	3%
Strongly Disagree	23%
Disagree	35%
Neither Agree nor Disagree	21%
Agree	15%
Strongly Agree	3%
<b>10. Would get psychological counseling if needed</b>	

Questions in SM Survey	N=6,714
Missing	4%
Strongly Disagree	3%
Disagree	5%
Neither Agree nor Disagree	15%
Agree	55%
Strongly Agree	18%
<b>11. People don't understand what I have been through while in Armed Forces</b>	
Missing	2%
Strongly Disagree	8%
Disagree	19%
Neither Agree nor Disagree	30%
Agree	31%
Strongly Agree	10%
<b>12. Admire people who solve problems without professional help</b>	
Missing	2%
Strongly Disagree	4%
Disagree	16%
Neither Agree nor Disagree	50%
Agree	22%
Strongly Agree	5%
<b>13. Look for someone to talk to when something unpleasant happens</b>	
Missing	2%
Strongly Disagree	4%
Disagree	15%
Neither Agree nor Disagree	26%
Agree	46%
Strongly Agree	7%
<b>14. There is someone to make me feel better when I am feeling down</b>	
Missing	2%
Strongly Disagree	2%
Disagree	4%
Neither Agree nor Disagree	15%
Agree	54%
Strongly Agree	23%
<b>15. Tend to keep depressed or sad feelings to self</b>	
Missing	2%
Strongly Disagree	6%
Disagree	25%
Neither Agree nor Disagree	29%
Agree	31%
Strongly Agree	7%
<b>16. There are people to whom I can talk about my deployment experiences</b>	

Questions in SM Survey	N=6,714
Missing	2%
Strongly Disagree	1%
Disagree	5%
Neither Agree nor Disagree	14%
Agree	61%
Strongly Agree	17%
<b>17. Would want to get help if upset or down for a long time</b>	
Missing	2%
Strongly Disagree	2%
Disagree	6%
Neither Agree nor Disagree	21%
Agree	54%
Strongly Agree	15%
<b>18. People rarely talk to me about their personal problems</b>	
Missing	2%
Strongly Disagree	14%
Disagree	42%
Neither Agree nor Disagree	27%
Agree	13%
Strongly Agree	2%
<b>19. Family and friends carefully listen and understand</b>	
Missing	2%
Strongly Disagree	2%
Disagree	8%
Neither Agree nor Disagree	29%
Agree	48%
Strongly Agree	10%
<b>20. Prefer not to talk about problems</b>	
Missing	2%
Strongly Disagree	6%
Disagree	26%
Neither Agree nor Disagree	32%
Agree	27%
Strongly Agree	6%
<b>21. Aware of moods and feelings</b>	
Missing	3%
Strongly Disagree	1%
Disagree	3%
Neither Agree nor Disagree	15%
Agree	62%
Strongly Agree	16%
<b>22. Don't allow feelings to influence decisions</b>	
Missing	2%
Strongly Disagree	2%
Disagree	16%

Questions in SM Survey	N=6,714
Neither Agree nor Disagree	36%
Agree	34%
Strongly Agree	8%
<b>23. Have friends or relatives to go to for good advice</b>	
Missing	2%
Strongly Disagree	1%
Disagree	5%
Neither Agree nor Disagree	18%
Agree	56%
Strongly Agree	17%
<b>24. Emotional problems are more likely solved by a professional than by trying to solve them alone</b>	
Missing	2%
Strongly Disagree	3%
Disagree	13%
Neither Agree nor Disagree	42%
Agree	31%
Strongly Agree	7%
<b>25. Can spot the signs of post-traumatic stress</b>	
Missing	2%
Strongly Disagree	3%
Disagree	12%
Neither Agree nor Disagree	37%
Agree	39%
Strongly Agree	7%
<b>26. Can spot the signs of depression</b>	
Missing	2%
Strongly Disagree	2%
Disagree	5%
Neither Agree nor Disagree	23%
Agree	58%
Strongly Agree	9%
<b>27. Can spot the signs of a concussion</b>	
Missing	2%
Strongly Disagree	3%
Disagree	12%
Neither Agree nor Disagree	33%
Agree	42%
Strongly Agree	8%
<b>28. Know how to determine if someone is drinking too much alcohol</b>	
Missing	2%
Strongly Disagree	1%
Disagree	4%
Neither Agree nor Disagree	17%
Agree	59%
Strongly Agree	17%

Questions in SM Survey		N=6,714
<b>29. Members of unit know they can depend on each other</b>		
Missing		2%
Strongly Disagree		4%
Disagree		7%
Neither Agree nor Disagree		22%
Agree		50%
Strongly Agree		15%
<b>30. Someone in unit would be supportive if I were stressed or feeling down</b>		
Missing		3%
Strongly Disagree		3%
Disagree		6%
Neither Agree nor Disagree		19%
Agree		54%
Strongly Agree		15%
<b>31. Someone in unit would help with an emotional or family problem</b>		
Missing		2%
Strongly Disagree		4%
Disagree		6%
Neither Agree nor Disagree		21%
Agree		52%
Strongly Agree		15%
<b>My unit NCO...</b>		
<b>32. Makes sure there is time to attend appointments</b>		
Missing		2%
Strongly Disagree		2%
Disagree		5%
Neither Agree nor Disagree		26%
Agree		51%
Strongly Agree		13%
<b>33. Encourages openness about problems experienced on the DD Form 2900</b>		
Missing		3%
Strongly Disagree		3%
Disagree		5%
Neither Agree nor Disagree		32%
Agree		46%
Strongly Agree		11%
<b>34. Strongly supports the PDHRA process</b>		
Missing		3%
Strongly Disagree		2%
Disagree		4%
Neither Agree nor Disagree		32%
Agree		47%
Strongly Agree		13%

Questions in SM Survey		N=6,714
<b>35. Has no compassion for unit members with emotional or family problems</b>		
Missing		3%
Strongly Disagree		21%
Disagree		40%
Neither Agree nor Disagree		26%
Agree		9%
Strongly Agree		2%
<b>36. Has talked about own service-related mental health problems or treatment</b>		
Missing		3%
Strongly Disagree		6%
Disagree		16%
Neither Agree nor Disagree		48%
Agree		24%
Strongly Agree		4%
<b>37. Answers to above questions same for unit officer</b>		
Missing		2%
Strongly Disagree		3%
Disagree		7%
Neither Agree nor Disagree		33%
Agree		43%
Strongly Agree		12%
<b>If I were to reveal any emotional or mental health problems on the PDHRA it is likely that...</b>		
<b>38. Could be denied a security clearance in the future</b>		
Missing		2%
Strongly Disagree		14%
Disagree		29%
Neither Agree nor Disagree		38%
Agree		13%
Strongly Agree		4%
<b>39. It would assist me in finding help</b>		
Missing		2%
Strongly Disagree		3%
Disagree		6%
Neither Agree nor Disagree		27%
Agree		51%
Strongly Agree		11%
<b>40. It could harm my career</b>		
Missing		3%
Strongly Disagree		12%
Disagree		30%
Neither Agree nor Disagree		37%
Agree		14%
Strongly Agree		4%
<b>41. Unit members would have less confidence in me</b>		

Questions in SM Survey	N=6,714
Missing	2%
Strongly Disagree	11%
Disagree	31%
Neither Agree nor Disagree	35%
Agree	17%
Strongly Agree	5%
<b>42. Unit leadership would doubt my dependability</b>	
Missing	2%
Strongly Disagree	11%
Disagree	30%
Neither Agree nor Disagree	34%
Agree	16%
Strongly Agree	5%
<b>Being referred to a mental health provider would NOT be helpful because...</b>	
<b>43. Would be too hard to get time off work</b>	
Missing	3%
Strongly Disagree	12%
Disagree	38%
Neither Agree nor Disagree	29%
Agree	15%
Strongly Agree	4%
<b>44. Would cost too much money</b>	
Missing	3%
Strongly Disagree	14%
Disagree	40%
Neither Agree nor Disagree	30%
Agree	11%
Strongly Agree	3%
<b>45. The visit would not remain confidential</b>	
Missing	3%
Strongly Disagree	14%
Disagree	39%
Neither Agree nor Disagree	30%
Agree	11%
Strongly Agree	4%
<b>46. The services provided are not effective</b>	
Missing	3%
Strongly Disagree	12%
Disagree	38%
Neither Agree nor Disagree	38%
Agree	6%
Strongly Agree	2%
<b>47. Medications I might be given have too many bad side effects</b>	
Missing	3%
Strongly Disagree	8%

Questions in SM Survey	N=6,714
Disagree	26%
Neither Agree nor Disagree	43%
Agree	15%
Strongly Agree	4%
<b>48. Religious counseling would be more helpful</b>	
Missing	3%
Strongly Disagree	11%
Disagree	19%
Neither Agree nor Disagree	51%
Agree	12%
Strongly Agree	4%
<b>49. Can handle problems on my own or with help from family and friends</b>	
Missing	3%
Strongly Disagree	4%
Disagree	16%
Neither Agree nor Disagree	40%
Agree	28%
Strongly Agree	8%
<b>50. Since returning from deployment, experienced an emotional, stress, or family problem</b>	
Missing	3%
Yes	33%
No	64%
<b>If yes, have you talked to any of the following individuals about it?</b>	
<b>50a. Medical professional</b>	
Missing	60%
Yes	10%
No	30%
<b>50b. Mental Health professional</b>	
Missing	60%
Yes	10%
No	30%
<b>50c. Religious or spiritual leader</b>	
Missing	60%
Yes	8%
No	32%
<b>50d. Family or Friend</b>	
Missing	59%
Yes	25%
No	15%
<b>51. Friends or family suggested you seek help for an emotional, alcohol, stress, or family problem</b>	
Missing	9%
Yes	20%
No	71%

Questions in SM Survey		N=6,714
<b>52. Completed the PDHRA since last deployment</b>		
<b>Yes, on a computer</b>		
Missing		7%
Yes		71%
No		22%
<b>Yes, on the telephone</b>		
Missing		7%
Yes		3%
No		91%
<b>Yes, using paper and pencil</b>		
Missing		7%
Yes		7%
No		86%
<b>No</b>		
Missing		7%
Yes		15%
No		78%
<b>53. Where were you when you completed the PDHRA?</b>		
<b>I was by myself</b>		
Missing		19%
Yes		28%
No		54%
<b>I was in a group</b>		
Missing		19%
Yes		55%
No		27%
<b>54. When I completed the PDHRA I was...</b>		
<b>On duty</b>		
Missing		20%
Yes		72%
No		8%
<b>Off duty</b>		
Missing		20%
Yes		71%
No		15%
<b>55. Completing PDHRA helped identify concerns</b>		
Missing		15%
Strongly Disagree		4%
Disagree		8%
Neither Agree nor Disagree		39%
Agree		30%
Strongly Agree		4%
<b>On the self-report questionnaire (DD Form 2900) I fully disclosed...</b>		
<b>56. Problems or concerns about physical health</b>		
Missing		13%

Questions in SM Survey	N=6,714
Strongly Disagree	3%
Disagree	6%
Neither Agree nor Disagree	19%
Agree	46%
Strongly Agree	14%
<b>57. Problems or concerns about emotional health</b>	
Missing	13%
Strongly Disagree	4%
Disagree	7%
Neither Agree nor Disagree	21%
Agree	42%
Strongly Agree	13%
<b>58. Problems or concerns about alcohol use</b>	
Missing	13%
Strongly Disagree	5%
Disagree	7%
Neither Agree nor Disagree	21%
Agree	40%
Strongly Agree	14%
<b>59. Did you complete a one-on-one interview with a health care provider?</b>	
<b>Yes, by telephone</b>	
Missing	20%
Yes	2%
No	78%
<b>Yes, in person</b>	
Missing	20%
Yes	69%
No	11%
<b>No</b>	
Missing	20%
Yes	9%
No	71%
<b>60. Provider showed interest and concern for well-being</b>	
Missing	17%
Strongly Disagree	2%
Disagree	3%
Neither Agree nor Disagree	15%
Agree	48%
Strongly Agree	15%
<b>61. Provider reviewed my health in adequate detail</b>	
Missing	17%
Strongly Disagree	1%
Disagree	4%
Neither Agree nor Disagree	17%
Agree	47%

Questions in SM Survey	N=6,714
Strongly Agree	13%
<b>62. Provider seemed out of touch with what it is like to be deployed</b>	
Missing	17%
Strongly Disagree	8%
Disagree	30%
Neither Agree nor Disagree	28%
Agree	13%
Strongly Agree	3%
<b>63. Provider could help get me access to care</b>	
Missing	17%
Strongly Disagree	1%
Disagree	3%
Neither Agree nor Disagree	19%
Agree	48%
Strongly Agree	12%
<b>64. Provider helped me be more aware of problems</b>	
Missing	17%
Strongly Disagree	2%
Disagree	6%
Neither Agree nor Disagree	35%
Agree	32%
Strongly Agree	8%
<b>65. Felt a great deal of trust in provider</b>	
Missing	17%
Strongly Disagree	2%
Disagree	5%
Neither Agree nor Disagree	32%
Agree	34%
Strongly Agree	9%
<b>66. Learned a lot from the provider</b>	
Missing	17%
Strongly Disagree	3%
Disagree	7%
Neither Agree nor Disagree	40%
Agree	25%
Strongly Agree	7%
<b>67. Knew the provider before this contact</b>	
Missing	20%
Yes	7%
No	74%
<b>67a. If yes, was the provider associated with unit</b>	
Missing	73%
Yes	5%
No	21%
<b>68. How long was the PDHRA interview</b>	
Missing	20%

<b>Questions in SM Survey</b>	<b>N=6,714</b>
Less than 5 minutes	22%
5-10 minutes	37%
11-15 minutes	14%
16-25 minutes	5%
26 minutes or more	3%
<b>69. Knew DOD policy on mental health treatment disclosure</b>	
Missing	13%
Yes	22%
No	65%

## **Appendix T: SM Survey Study Population**

Basic demographic characteristics of the SMs are presented here for informational purposes. Because a random sampling procedure was not feasible for this study, these data are not representative of all military personnel, or military personnel in a particular Service Branch or Component. Population characteristics are presented for informational purposes only and were not used to analyze group differences.

#### *Branch and Component*

Table T.1 shows that survey participants served with the four main military branches – Army, Marines, Air Force, and Navy. However, the percentage associated with each branch is highly variable. The vast majority (83%) were Army; relatively few were in the Navy (2%) or Air Force (4%). The sample is also unevenly distributed by component. While most (59%) participants were in the National Guard, very few were in the Reserve (6%). The distribution of participants by component was highly associated with Service Branch. For example, 100% of participants in the Air Force and Navy had active duty status.

**Table T.1 Component by Branch**

	<b>Army N=5540</b>	<b>Marines N=782</b>	<b>Navy N=136</b>	<b>Air Force N=256</b>	<b>Total N=6714</b>
<b>Component</b>					
National Guard	71.6%	0.0%	0.0%	0.0%	59.1%
Active	27.2%	52.9%	100.0%	100.0%	34.5%
Reserve	1.2%	47.1%	0.0%	0.0%	6.4%
<b>Total</b>	<b>82.6%</b>	<b>11.6%</b>	<b>2.0%</b>	<b>3.8%</b>	<b>100%</b>

#### *Rank/Grade*

As Table T.2 shows, most (51%) participants were enlisted with a pay grade of E01 to E04; about a third were E5-E6, with categories by rank/grade decreasingly represented as rank/grade increased. While this pattern was found across all branches of the military, participants in the Air Force tended to be of higher rank than those in other branches of service.

**Table T.2 Rank/Grade by Branch**

	<b>Army N=5369</b>	<b>Marines N=775</b>	<b>Navy N=133</b>	<b>Air Force N=255</b>	<b>Total N=6532</b>
<b>Rank or Grade</b>					
E1-E4	50.2%	66.1%	60.9%	23.1%	51.3%
E5-E6	32.2%	25.2%	34.6%	42.7%	31.8%
E7-E9	7.6%	4.1%	2.3%	16.5%	7.4%
O1-O3	6.5%	3.5%	2.3%	8.6%	6.2%
O4-O9	1.7%	1.2%	.0%	9.0%	1.9%
W01-W05	1.7%	.0%	.0%	.0%	1.4%

Table T.3 shows that participant's rank varied by Service component. For example, a larger proportion of survey participants in the Reserves had lower grade/rank than other participants in other service components.

**Table T.3 Rank by Service Component**

<b>Grade or Rank</b>	<b>Active N=2253</b>	<b>National Guard N=3851</b>	<b>Reserve N=428</b>	<b>Total N=6352</b>
<b>Rank or Grade</b>				
E1-E4	44.1%	53.3%	70.3%	51.3%
E5-E6	34.1%	31.6%	22.2%	31.8%
E7-E9	8.6%	7.2%	3.3%	7.4%
O1-O3	8.2%	5.4%	2.3%	6.2%
O4-O9	2.0%	1.8%	1.6%	1.9%
W01-W05	3.0%	0.6%	0.2%	1.4%

*Age*

While most (38%) participants were less than 25 years old, older age groups were well represented (Table T.4). However, age tended to vary by Service component, at least among survey participants (Table T.5). Reservists tended to be younger than those in Active Duty or the National Guard – 61% were between 18-24 years old compared to 41% and 34% respectively. Participants in the National Guard were more than twice as likely (15%) as others to be 40 or more years of age.

**Table T.4 Age by Branch**

	<b>Army N=5519</b>	<b>Marines N=781</b>	<b>Navy N=136</b>	<b>Air Force N=254</b>	<b>Total N=6690</b>
<b>Age</b>					
18-24	35.3%	62.2%	61.0%	19.3%	38.3%
25-29	25.8%	22.9%	27.9%	31.1%	25.7%
30-39	25.7%	12.7%	10.3%	32.3%	24.1%
40 or over	13.2%	2.2%	.7%	17.3%	11.8%

**Table T.5 Age by Component**

	<b>Active N=2303</b>	<b>National Guard N=3954</b>	<b>Reserve N=433</b>	<b>Total N=6690</b>
<b>Age</b>				
18-24	41.0%	34.4%	60.5%	38.3%
25-29	28.4%	24.6%	22.4%	25.7%
30-39	23.4%	25.8%	12.0%	24.1%
40 or over	7.2%	15.2%	5.1%	11.8%

*Gender*

While most participants were unsurprisingly male (92%) in all branches of service, females were about twice as likely to be in the Air Force (20%) or Navy (16%) than in the Army (8%) (Table T.6). Gender also varied by Component. While nearly all (98%) reservists are male, a larger proportion of females are active duty (11%) or in the National Guard (7%) (Table T.7).

**Table T.6 Gender by Branch**

	<b>Army N=5337</b>	<b>Marines N=775</b>	<b>Navy N=132</b>	<b>Air Force N=253</b>	<b>Total N=6497</b>
<b>Gender</b>					
Male	92.3%	96.4%	84.1%	80.2%	92.1%
Female	7.7%	3.6%	15.9%	19.8%	7.9%

**Table T.7 Gender by Component**

	<b>Active N=2247</b>	<b>National Guard N=3823</b>	<b>Reserve N=427</b>	<b>Total N=6497</b>
<b>Gender</b>				
Male	89.20%	93.30%	97.70%	92.10%
Female	10.80%	6.70%	2.30%	7.90%

## **Appendix U: Service Member Single Items Relationships**

### Relationship Among Non-scale (Single) Items and Reported Disclosure on PDHRA (from SM survey)

**Table U.1 Mean disclosure for SMs who were and were not briefed by a unit NCO/Officer**

	Unit NCO/Officer briefed on PDHRA						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	5039	2.6	0.7	765	2.5	0.7	0.01	0.12
Disclosed concerns about emotional health	5038	2.5	0.7	763	2.4	0.7	0.00	0.14
Disclosed concerns about alcohol use	5016	2.5	0.7	761	2.4	0.7	0.01	0.11

*\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree*

**Table U.2 Mean disclosure for SMs who had and did not have a NCO in theater**

	At least one unit NCO in theater						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	4841	2.6	0.7	960	2.5	0.7	0.25	0.05
Disclosed concerns about emotional health	4841	2.5	0.7	958	2.5	0.7	0.28	0.05
Disclosed concerns about alcohol use	4821	2.5	0.7	956	2.5	0.7	0.41	0.04

*\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree*

**Table U.3 Mean disclosure for SMs who were and were not planning to separate**

	Separate from military in next 6 months							ES
	Yes			No			bootstrap	
	N	Mean	SD	N	Mean	SD	p-value	
Disclosed concerns about physical health	3189	2.6	0.7	2631	2.6	0.7	0.34	0.05
Disclosed concerns about emotional health	3186	2.5	0.7	2632	2.5	0.7	0.47	0.06
Disclosed concerns about alcohol use	3174	2.5	0.7	2622	2.5	0.7	0.77	0.04

*\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree*

**Table U.4 Mean disclosure for SMs who were and were not seeking promotion**

	Seeking promotion in next 6 months						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	669	2.5	0.7	5155	2.6	0.7	0.13	0.05
Disclosed concerns about emotional health	670	2.5	0.7	5153	2.5	0.7	0.03	0.05
Disclosed concerns about alcohol use	664	2.5	0.7	5136	2.5	0.7	0.30	0.03

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.5 Mean disclosure for SMs who had and had not read written materials**

	Read written materials on re-integration						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	3348	2.6	0.7	2449	2.5	0.7	<.0001	0.16
Disclosed concerns about emotional health	3346	2.6	0.7	2450	2.4	0.7	<.0001	0.18
Disclosed concerns about alcohol use	3329	2.5	0.7	2442	2.4	0.7	<.0001	0.12

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.6 Mean disclosure for SMs who had and had not viewed websites**

	Viewed any websites on re-integration						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	2046	2.6	0.6	3625	2.6	0.7	0.00	0.12
Disclosed concerns about emotional health	2044	2.6	0.7	3626	2.5	0.7	<.0001	0.13
Disclosed concerns about alcohol use	2034	2.5	0.7	3611	2.5	0.7	0.06	0.06

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.7 Mean disclosure for SMs who had and had not seen a film or video**

	Saw a film or video not on the Web on re-integration						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	3251	2.6	0.7	2540	2.5	0.7	<.0001	0.14
Disclosed concerns about emotional health	3248	2.6	0.7	2542	2.4	0.7	<.0001	0.17
Disclosed concerns about alcohol use	3233	2.5	0.7	2532	2.4	0.7	<.0001	0.13

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.8 Mean disclosure for SMs who had and did not have a problem since deployment**

	Problem since deployment (as reported on SM survey)						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	1988	2.6	0.7	3811	2.6	0.7	0.97	0.01
Disclosed concerns about emotional health	1990	2.5	0.7	3808	2.5	0.7	0.11	0.05
Disclosed concerns about alcohol use	1984	2.4	0.7	3792	2.5	0.7	0.00	0.10

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.9 Mean disclosure for SMs who had and did not have family or friends suggesting help**

	Family or friends suggest seeking help						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	1214	2.6	0.7	4220	2.6	0.7	0.38	0.04
Disclosed concerns about emotional health	1216	2.5	0.7	4215	2.5	0.7	0.99	0.01
Disclosed concerns about alcohol use	1209	2.5	0.7	4201	2.5	0.7	0.12	0.06

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.10 Mean disclosure for SMs who knew and did not know the PDHRA provider**

	Knew provider before PDHRA interview						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	440	2.4	0.8	4907	2.6	0.7	<.0001	<b>0.23</b>
Disclosed concerns about emotional health	439	2.4	0.8	4907	2.5	0.7	0.00	<b>0.20</b>
Disclosed concerns about alcohol use	438	2.4	0.8	4886	2.5	0.7	0.00	0.15

\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree

**Table U.11 Mean disclosure for SMs who's provider was and was not associated with unit**

	Knew provider before PDHRA interview- associated with unit						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	356	2.4	0.8	1407	2.5	0.7	0.10	0.12
Disclosed concerns about emotional health	355	2.4	0.7	1407	2.4	0.7	0.65	0.05
Disclosed concerns about alcohol use	352	2.4	0.8	1403	2.4	0.7	0.91	0.03

*\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree*

**Table U.12 Mean disclosure for SMs who did and did not know the DoD policy**

	Knew DoD policy						bootstrap p-value	ES
	Yes			No				
	N	Mean	SD	N	Mean	SD		
Disclosed concerns about physical health	1324	2.6	0.7	3921	2.6	0.7	0.99	0.01
Disclosed concerns about emotional health	1322	2.5	0.7	3922	2.5	0.7	0.71	0.02
Disclosed concerns about alcohol use	1318	2.5	0.7	3908	2.5	0.7	0.98	0.01

*\*Disclosure questions are on a 1-3 scale, with 1 = Disagree, 2 = Neither Disagree or Agree, and 3 = Agree*

## **Appendix V: Service Member Single Item and Scale Relationships**

### Relationship of SM Survey Scales to Non-scale (Single) Survey Items

**Table V.1 Scale 1 mean differences by SM survey items**

<b>Scale 1. Post-deployment Support and Help Seeking</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
At least one unit NCO in theater	5371	3.6	0.5	1114	3.5	0.5	0.02	0.09
Unit NCO/Officer briefed on PDHRA	5627	3.6	0.5	862	3.4	0.5	<.0001	<b>0.27</b>
Problem since deployment	2183	3.4	0.5	4273	3.6	0.5	<.0001	<b>0.57</b>
Family or friends suggest seeking help	1339	3.3	0.5	4721	3.6	0.5	<.0001	<b>0.52</b>
Medical professional	625	3.4	0.5	1478	3.3	0.5	0.89	0.05
Mental Health professional	653	3.4	0.5	1468	3.3	0.5	0.44	0.08
Religious/Spiritual leader	474	3.4	0.5	1628	3.3	0.5	<.0001	<b>0.25</b>
Family or friends	1593	3.5	0.5	553	3.1	0.5	<.0001	0.82

**Table V.2 Scale 2 mean differences by SM survey items**

<b>Scale 2. Unit Cohesion for Personal Problems</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
At least one unit NCO in theater	5361	3.7	0.8	1114	3.6	0.8	0.00	0.12
Unit NCO/Officer briefed on PDHRA	5615	3.7	0.8	864	3.4	1.0	<.0001	<b>0.41</b>

**Table V.3 Scale 3 mean differences by SM survey items**

<b>Scale 3. PDHRA Leadership Support</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
At least one unit NCO in theater	5376	3.6	0.6	1114	3.5	0.6	0.00	0.11
Unit NCO/Officer briefed on PDHRA	5631	3.6	0.6	862	3.3	0.7	<.0001	<b>0.50</b>

**Table V.4 Scale 4 mean differences by SM survey items**

<b>Scale 4. PDHRA Self Disclosure</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
Medical professional	575	3.7	0.8	1335	3.6	0.9	0.15	0.11
Mental Health professional	589	3.7	0.8	1336	3.5	0.9	0.01	0.16
Religious/Spiritual leader	440	3.7	0.8	1466	3.6	0.9	0.33	0.10
Family or friends	1446	3.7	0.8	501	3.4	0.9	<.0001	<b>0.30</b>
Knew DOD policy on health disclosure	1311	3.7	0.9	3894	3.7	0.9	0.65	0.01

**Table V.5 Scale 5 mean differences by SM survey items**

<b>Scale 5. Satisfaction with the PDHRA Provider</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
Problem since deployment	1895	3.5	0.7	3602	3.6	0.6	<.0001	0.15
Family or friends suggest seeking help	1168	3.5	0.7	3974	3.6	0.6	0.00	0.13
Medical professional	562	3.5	0.7	1269	3.5	0.7	0.95	0.04
Mental Health professional	570	3.6	0.7	1275	3.5	0.7	0.38	0.09
Religious/Spiritual leader	428	3.6	0.7	1401	3.5	0.7	0.04	0.15
Family or friends	1387	3.6	0.7	479	3.4	0.7	<.0001	<b>0.32</b>

**Table V.6 Scale 7 mean differences by SM survey items**

<b>Scale 7. General Willingness to Self-Disclose</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
Separate from military in next 6 months	718	3.1	0.8	5841	3.2	0.8	0.40	0.06
Seeking promotion in next 6 months	3617	3.2	0.8	2936	3.2	0.8	0.98	0.01
Problem since deployment	2193	2.9	0.8	4295	3.3	0.7	<.0001	<b>0.52</b>
Family or friends suggest seeking help	1350	2.9	0.8	4741	3.3	0.8	<.0001	<b>0.44</b>
Medical professional	625	2.9	0.7	1487	2.9	0.8	0.58	0.07
Mental Health professional	656	2.9	0.7	1474	2.9	0.8	0.62	0.06
Religious/Spiritual leader	476	3.1	0.7	1634	2.9	0.8	<.0001	<b>0.36</b>
Family or friends	1601	3.0	0.7	554	2.6	0.7	<.0001	<b>0.66</b>

**Table V.7 Scale 8 mean differences by SM survey items**

<b>Scale 8. Perceived Stigma Related to Disclosure</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
Separate from military in next 6 months	714	2.7	0.9	5809	2.7	0.9	0.75	0.04
Seeking promotion in next 6 months	3594	2.7	0.9	2923	2.7	0.9	0.03	0.07
Problem since deployment	2198	2.9	0.9	4310	2.6	0.9	<.0001	<b>0.35</b>
Family or friends suggest seeking help	1357	2.9	0.9	4754	2.6	0.9	<.0001	<b>0.34</b>
Medical professional	629	2.9	0.9	1489	2.9	0.9	0.93	0.04
Mental Health professional	658	2.9	0.9	1478	2.9	0.9	1.00	0.00
Religious/Spiritual leader	477	2.8	0.9	1639	2.9	0.9	0.26	0.10
Family or friends	1605	2.8	0.9	556	3.1	0.9	<.0001	<b>0.25</b>

**Table V.8 Scale 9 mean differences by SM survey items**

<b>Scale 9. Barriers to Accepting Mental Health Referral</b>								
	<b>Yes</b>			<b>No</b>			<b>bootstrap p-value</b>	<b>ES</b>
	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>		
Separate from military in next 6 months	710	2.7	0.7	5783	2.7	0.6	0.35	0.06
Seeking promotion in next 6 months	3573	2.7	0.7	2915	2.7	0.6	0.01	0.08
Problem since deployment	2195	2.8	0.6	4296	2.6	0.6	<.0001	<b>0.25</b>
Family or friends suggest seeking help	1351	2.8	0.6	4747	2.7	0.6	<.0001	0.17
Medical professional	627	2.7	0.7	1487	2.8	0.6	0.00	0.16
Mental Health professional	655	2.7	0.6	1477	2.8	0.6	<.0001	<b>0.22</b>
Religious/Spiritual leader	476	2.8	0.7	1636	2.8	0.6	1.00	0.00
Family or friends	1602	2.8	0.6	555	2.9	0.7	<.0001	<b>0.26</b>

## **Appendix W: RIAS Coding Manual**

This manual is copyrighted and available from RIAS Works at  
<http://riasworks.com/background.html>

## **Appendix X: VICS Internal Coding**

## INTERNAL CODING SHEET FOR LHI CALL CENTER ANALYSIS

### Decision Rules:

- If the provider asks a question, and the SM starts talking about a concern that the provider did not mention the following action will be taken. The provider will be coded as asking the question he/she actually asked and the SM will be coded for initiating conversation about the new concern.
- If multiple issues (e.g., knee, back, and ankle pain) are brought up in an area of interest (e.g., physical concerns) the following action will be taken. All questions in that area of interest (e.g., physical concerns) should be marked positively if they apply to at least one symptom discussed (e.g., if the provider asked in the knee was from deployment but neglects to ask about the ankle – they deployment question should be marked “yes”).
- Elaboration/clarifying questions (e.g., Provider asked questions to clarify/learn more/understand SM’s response about Physical concern.) are when the provider asks a question that was NOT on the PDHRA. So, for example, if they are discussing PTSD and the provider asks “Have you felt on guard” – this is NOT an elaboration question, it is simply a reiterative question.
- If the provider makes a general referral statement at the end of the conversation, when no topic is indicated (“Before I sign off on this, would you like a referral for anything deployment related”) – this will be marked in the notable events question in the summary section (Sum 15a).
- If the discussion is bouncing between 2 problems in multiple sections (i.e., breathing problems in the Physical Health section and burning trash in the Exposure section). Then specific questions (i.e. elaboration, deployment related, in seen for treatment) will be coded in the section that they were talking about right before the comment was made. For example, “I’ve been having breathing problems... Yes, it was because of the trash burning they did on base over there”. That would indicate a Yes to Phys 2, Phys 3, Expo 2, Expo 3, and Expo 5 – NOT Phys 8.

**Key:** Grey boxes in Specific Area of Interest Sections indicate that these questions are unique the particular section and are not found in all of the other sections.

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**SM Specific Information**

Coder mark the following if mentioned in the discussion. Circle the appropriate response.

	Mentioned	If mentioned:
<b>Dem 1)</b> Perceived SM gender <i>SM_Gender</i>	Male (0) Female (1)	
<b>Dem 2)</b> SM Branch/Service <i>Branch_Service</i>  **Note: The question applies to what they are now. So if the SM was Active but is now Reserve, the answer should reflect Reserve.	Yes (1) No (0)	<b>Dem 2a)</b> Which? <i>Sub_Branch_Service</i>  Army Active / Army Reserve / Army NG / Army NOS (1) (2) (3) (4)  Marine Active / Marine Reserve / Marine NOS (5) (6) (7)  Navy Active / Navy Reserve / Navy NOS (8) (9) (10)  AF Active / AF Reserve / AF NG / AF NOS / NA (11) (12) (13) (14) (-8)
<b>Dem 3)</b> SM deployment location <i>Deploy_Loc</i>	Yes (1) No (0)	<b>Dem 3a)</b> Where?  Afghanistan (OEF) <i>Sub_Loc_Afg</i> Iraq (OIF) <i>Sub_Loc_Iraq</i> Kuwait <i>Sub_Loc_Kuwait</i> Other _____ <i>Sub_Loc_Oth</i>

**General Health and Mental Health Questions: Qx 1 - 6**

Coder mark the following if mentioned in the discussion. Circle the appropriate response.

	Mentioned	If mentioned:
<b>GH 1)</b> Did the provider mention the SM's overall health and/or health comparison to before deployment (Qx 1 and/or 2 of DD 2900)?  <i>GH_OverHlth</i>	Yes (1) No (0)	
<b>GH 2)</b> Did the provider mention the SM's physical or psychological issues leading to impairment in functioning (Qx 3 and/or 4 of DD 2900)?  <i>GH_Issue</i>	Yes (1) No (0)	
<b>GH 3)</b> Did the provider mention the SM's health care visitation or hospitalization; this could be in theater or since return from deployment, (Qx 5 and/or 6 of DD 2900)?  <i>GH_HospVis</i>	Yes (1) No (0)	

**Note for sub Qxs:** \*Code appropriately here AND If SM responded with physical and/or mental health information, then go to the appropriate section (physical concerns and/or mental health and fill out a "yes" to gateway question #1 (ie. Phys 1, Expo 1, MH 1, Alc 1) about mentioning concern and "SM" for the sub question about who mentioned concern first. Additionally, if these opening questions initiate a discussion about a specific area of interest, continue coding the interview in the now appropriate section (ie. if the above questions initiated a discussion about PTSD, the coder would fill out the mental health section as normal noting any referral, education, ect information).

**Physical & TBI: Qx 7 - 8**

**Anything referable that is not MH related – does NOT need to be related to deployment**

*Coder note: Mentioned means any words/discussion consistent with this concern by anyone. If provider mentioned the concern, it is not necessary for the SM to respond.*

**NOTE:** The term "Physical Health" refers to both positive and negative aspects of physical health

TBI is considered a physical health issue. If the interview talks specifically about a TBI this section would be coded as any physical health issue would be coded.

	Mentioned	If mentioned:
<b>Phys 1)</b> Was Physical Health mentioned at any time during the interview  <i>Phys_Mention</i>	Yes (1) No (0)	<b>Phys 1a)</b> Who mentioned Physical Health first? Provider (1) PhysSub_Mention SM (2) NA (ONLY If Phys 1 = 0) (-8)
<b>Phys 2)</b> Provider repeated original SM responses to any/all questions related to physical health as marked on DD2900. <i>Note: does not have to be verbatim; looking for language consistent with answer choices</i>  <i>Phys_AnsRepeat</i>	Yes (1) No (0)	
<b>Phys 3)</b> There was an indication that there was a positive response to at least one question for Physical Health  <i>Phys_Positive</i>	Yes (1) No (0)  NA (ONLY if Phys 1 = 0) (-8)	
<b>Phys 4)</b> Provider asked about (or this information was volunteered by the SM) a blast and/or explosion (IED, RPG, land mine, grenade), vehicular accident/crash, fragment wound and/or bullet wound above your shoulders, fall, and/or other injury to the head  <i>Phys_Blast</i>	Yes (1) No (0)	
<b>Phys 5)</b> Provider asked about (or this information was volunteered by the SM) the symptoms related to TBI (ie. memory problems, balance and/or dizziness, ringing in the ears, sensitivity to light, irritability, and/or headaches)  <i>Phys_TBISymp</i>	Yes (1) No (0)	
<b>Phys 6)</b> Traumatic brain injury (TBI) was mentioned  <i>Phys_TBIMen</i>	Yes (1) No (0)	

**Answer Elaboration if the Area of Interest was Indicated Either in Original DD 2900 or As Clarified in Discussion**

<b>Phys 7)</b> Provider asked questions to clarify/learn more/understand SM's response about Physical concern.  <i>Phys_Elab</i>	<i>Yes (1)</i> <i>No (0)</i>  <i>NA (ONLY if Phys 3 ≠ 1)</i> <i>(-8)</i>	
<b>Phys 8)</b> Provider asked if the Physical concern was related to deployment or the information was volunteered by the SM  <i>Phys_Deploy</i>	<i>Yes (1)</i> <i>No (0)</i>  <i>NA (ONLY if Phys 3 ≠ 1)</i> <i>(-8)</i>	
<b>Phys 9)</b> Provider asked if SM had seen a provider for this physical concern or the information was volunteered by the SM  <i>Phys_Treatment</i>	<i>Yes (1)</i> <i>No (0)</i>  <i>NA (ONLY if Phys 3 ≠ 1)</i> <i>(-8)</i>	
<b>Phys 10)</b> It was indicated that this Physical concern was recorded for documentation purposes ( <i>SM wanted it in medical record</i> )  <i>Phys_Document</i>	<i>Yes (1)</i> <i>No (0)</i>  <i>NA (ONLY if Phys 3 ≠ 1)</i> <i>(-8)</i>	<b>Phys 10a)</b> Who mentioned documentation first: <i>Provider (1)</i> <i>PhysSub_Document</i> <i>SM (2)</i> <i>NA (ONLY if Phys 10 ≠ 1) (-8)</i>

**Provider Education Provision**

<b>Phys 11)</b> Provider made statements that others have experienced and/or marked a positive response to areas of Physical Concern  <i>Phys_OthExp</i>	Yes (1) No (0)	<b>Phys 11a)</b> Who did the provider reference <i>Other SMs</i> <i>PhysSub_OthExpSM</i> <i>General population</i> <i>PhysSub_OthExpPop</i> <i>Provider him/herself</i> <i>PhysSub_OthExpSlf</i>  <b>Phys 11b)</b> Provider referenced others in effort to: <i>Destigmatize problem/encourage SM to accept the referral</i> (1) <i>Minimizing concern (eg. "Lots of people are flagged on this question who don't have an issue, this question is just too sensitive"</i> (2) <i>Neither to destigmatize or minimize</i> (0) <i>NA (ONLY if Phys 11 = 0)</i> (-8) <i>PhysSub_OthExpDestig</i>
<b>Phys 12)</b> Provider gave verbal education information about the area of Physical Concern ( <i>e.g., facts/figures, likely causes/symptoms/course/duration/severity, useful treatments/interventions/good people to help</i> )  <i>Phys_Edu</i>	Yes (1) No (0)	
<b>Phys 13)</b> Provider offered to give a handout/pamphlet or other resources ( <i>eg. website</i> ) to the SM about this area of Physical Concern  <i>Phys_Resource</i>	Yes (1) No (0)	

**Referral Talk**

<b>Phys 14)</b> Any mention of recommendation/need/desire for further evaluation and/or treatment for Physical Health and/or Physical concern due to exposure, this does NOT include MOS  <i>Phys_RefMen</i>	Yes (1) No (0)  <i>NA (ONLY if Phys 3 ≠ 1)</i> (-8)	<b>Phys 14a)</b> Who mentioned referral first? <i>Provider</i> (1) <i>PhysSub_RefMen</i> <i>SM</i> (2) <i>NA (ONLY if Phys 14 ≠ 1)</i> (-8)
<b>Phys 15)</b> SM accepted referral  <i>Phys_RefAccept</i>	Yes (1) No (0)  <i>NA (ONLY if Phys 14 ≠ 1)</i> (-8)	
<b>Phys 16)</b> SM made comments related to referral (note: typically refusal but could be made even if accept)  <i>Phys_RefSMComment</i> <i>*Note: If there is no Check Box that captures SM's referral comment, mark "Yes" to Phys 16 and write in comment in Notable Events (Sum 15a).</i>	Yes (1) No (0)  <i>NA (ONLY if Phys 14 ≠ 1)</i> (-8)	<b>Phys 16a)</b> Please check all that apply : <i>Fear of career / Already in Tx /</i> <i>Waiting for a scheduled appointment / Time off work /</i> <i>Doesn't want it in record / Doesn't think Tx will help /</i> <i>Already has social support / Thinks it will resolve with time / No health care coverage or too expensive</i>

*PhysSub\_RefCareer / PhysSub\_RefInTx / PhysSub\_RefWaitApt / PhysSub\_RefTimeWrk / PhysSub\_RefNo Recrd / PhysSub\_RefTxNoHlp / PhysSub\_RefSocSupprt / PhysSub\_RefResolvTime / PhysSub\_RefCoverage*

**Exposure: Qx 10**

*Coder note: Mentioned means any words/discussion consistent with this concern by anyone. If provider mentioned the concern, it is not necessary for the SM to respond.*

	Mentioned	If mentioned:
<b>Expo 1)</b> Was Exposure(s) mentioned at any time during the interview  <i>Expo_Mention</i>	Yes (1) No (0)	<b>Expo 1a)</b> Who mentioned Exposure(s) first? Provider (1) ExpoSub_Mention SM (2) NA (ONLY If Expo 1 = 0) (-8)
<b>Expo 2)</b> Provider repeated original SM responses to any/all questions related to Exposure(s) as marked on DD2900. <i>Note: does not have to be verbatim; looking for language consistent with answer choices</i>  <i>Expo_AnsRepeat</i>	Yes (1) No (0)	
<b>Expo 3)</b> There was an indication that there was a positive response to at least one question about Exposure concerns  <i>Expo_Positive</i>	Yes (1) No (0)  NA (ONLY if Expo 1 = 0) (-8)	

**Answer Elaboration if the Area of Interest was Indicated Either in Original DD 2900 or As Clarified in Discussion**

<b>Expo 4)</b> Provider asked questions to clarify/learn more/understand SM's response about Exposure concerns  <i>Expo_Elab</i>	Yes (1) No (0)  NA (ONLY if Expo 3 ≠ 1) (-8)	
<b>Expo 5)</b> Provider asked if the Exposure concern(s) is related to deployment or the information was volunteered by the SM  <i>Expo_Deploy</i>	Yes (1) No (0)  NA (ONLY if Expo 3 ≠ 1) (-8)	
<b>Expo 6)</b> Provider asked if SM had seen a provider for Exposure concern(s) or the information was volunteered by the SM  <i>Expo_Treatment</i>	Yes (1) No (0)  NA (ONLY if Expo 3 ≠ 1) (-8)	
<b>Expo 7)</b> It was indicated that Exposure concern(s) were listed for documentation purposes  <i>Expo_Document</i>	Yes (1) No (0)  NA (ONLY if Expo 3 ≠ 1) (-8)	<b>Expo 7a)</b> Who mentioned documentation first: Provider (1) ExpoSub_Document SM (2) NA (ONLY if Expo 7 ≠ 1) (-8)

**Provider Education Provision**

<p><b>Expo 8)</b> Provider made statements that others have experienced and/or marked a positive response for Exposure concern(s)</p> <p><i>Expo_OthExp</i></p>	<p>Yes (1) No (0)</p>	<p><b>Expo 8a)</b> Who did the provider reference Other SMs <i>ExpoSub_OthExpSM</i> General population <i>ExpoSub_OthExpPop</i> Provider him/herself <i>ExpoSub_OthExpSlf</i></p> <p><b>Expo 8b)</b> Provider referenced others in effort to: Destigmatize problem/encourage SM to accept the referral (1) Minimizing concern (eg. "Lots of people are flagged on this question who don't have an issue, this question is just too sensitive" (2) Neither to destigmatize or minimize (0) NA (ONLY if Expo 8 = 0) (-8) <i>ExpoSub_OthExpDestig</i></p>
<p><b>Expo 9)</b> Provider gave verbal education information about Exposure concerns (e.g., facts/figures, likely causes/symptoms/course/duration/severity, useful treatments/interventions/good people to help)</p> <p><i>Expo_Educ</i></p>	<p>Yes (1) No (0)</p>	
<p><b>Expo 10)</b> Provider offered to give a handout/pamphlet or other resources (e.g., website) to the SM about Exposure Concerns</p> <p><i>Expo_Resource</i></p>	<p>Yes (1) No (0)</p>	

**Referral Talk**

NOTE: If referral talk for exposure concerns is linked to another area of interest (ie. they have been exposed to burning trash but are having breathing issues, which are physical health concerns) then referral talk should be coded in the other area of interest mentioned. HOWEVER, if referral was discussed solely for exposure specifically, and did NOT mention any Physical Health, Mental Health, or Alcohol concerns associated with it, then identify this event in notable events (Sum 15a).

<b>Mental Health: Qx 11, 12, &amp; 14</b> <b>Anything referable that is not physically related – does NOT need to be related to deployment</b> <b>Specifically this includes Family Conflict, PTSD, and Depression (also: anxiety, irritability, anger)</b>		
	Mentioned	If mentioned:
<b>MH 1)</b> Was Mental Health mentioned at any time during the interview  <i>MH_Mention</i>	Yes (1) No (0)	<b>MH 1a)</b> Who mentioned the area of interest first? Provider (1) <i>MHSub_Mention</i> SM (2) NA (ONLY If MH 1 = 0) (-8) <b>MH 1b)</b> Which specific area(s) of interest were mentioned? Family/Social Conflicts <i>MHSub_MentionFam</i> PTSD/Anxiety <i>MHSub_MentionPTSD</i> Depression <i>MHSub_MentionDep</i> Anger/Aggression/Irritability <i>MHSub_MentionAngr</i> Other Mental Health Issue _____ <i>MHSub_Other</i>
<b>MH 2)</b> Provider repeated original SM responses to any/all questions related to Mental Health as marked on DD2900. <i>Note: does not have to be verbatim; looking for language consistent with answer choices</i>  <i>MH_AnsRepeat</i>	Yes (1) No (0)	
<b>MH 3)</b> There was an indication that there was a positive response to at least one question for this area of concern  <i>MH_Positive</i>	Yes (1) No (0)  NA (ONLY if MH 1 = 0) (-8)	
<b>Answer Elaboration if the Area of Interest was Indicated Either in Original DD 2900 or As Clarified in Discussion</b>		
<b>MH 4)</b> Provider asked questions to clarify/learn more/understand SM's response  <i>MH_Elab</i>	Yes (1) No (0)  NA (ONLY if MH 3 ≠ 1) (-8)	
<b>MH 5)</b> Provider asked if the Mental Health concern was related to deployment or the information was volunteered by the SM  <i>MH_Deploy</i>	Yes (1) No (0)  NA (ONLY if MH 3 ≠ 1) (-8)	
<b>MH 6)</b> Provider asked if SM had seen a provider for this Mental Health concern or the information was volunteered by the SM  <i>MH_Treatment</i>	Yes (1) No (0)  NA (ONLY if MH 3 ≠ 1) (-8)	

(CallID)

Note: In other sections there is a question about whether documentation was mentioned. This does not seem viable for Mental Health concerns.

### Provider Education Provision

<b>MH 7)</b> Provider made statements that others have experienced and/or marked a positive response to an area of Mental health concern.  <i>MH_OthExp</i>	Yes (1) No (0)	<b>MH 7a)</b> Who did the provider reference <i>Other SMs</i> <i>MHSub_OthExpSM</i> <i>General population</i> <i>MHSub_OthExpPop</i> <i>Provider him/herself</i> <i>MHSub_OthExpSlf</i>  <b>MH 7b)</b> Provider referenced others in effort to: <i>Destigmatize problem/encourage SM to accept the referral</i> (1) <i>Minimizing concern (eg. "Lots of people are flagged on this question who don't have an issue, this question is just too sensitive"</i> (2) <i>Neither to destigmatize or minimize</i> (0) <i>NA (ONLY if MH 7 = 0)</i> (-8) <i>MHSub_OthExpDestig</i>
<b>MH 8)</b> Provider gave verbal education information about the area of Mental Health (e.g., facts/figures, likely causes/symptoms/course/duration/severity, useful treatments/interventions/good people to help)  <i>MH_Educ</i>	Yes (1) No (0)	
<b>MH 9)</b> Provider offered to give a handout/pamphlet or other resources (e.g., website) to the SM about Mental Health  <i>MH_Resource</i>	Yes (1) No (0)	

### Referral Talk

<b>MH 10)</b> Any mention of recommendation/need/desire for further evaluation and/or treatment for Mental Health and/or Mental Health concern due to exposure, this does NOT include MOS  <i>MH_RefMen</i>	Yes (1) No (0)  NA (ONLY if MH 3 ≠ 1) (-8)	<b>MH 10a)</b> Who mentioned referral first? <i>Provider</i> (1) <i>MHSub_RefMen</i> <i>SM</i> (2) <i>NA (ONLY if MH 10 ≠ 1)</i> (-8)
<b>MH 11)</b> SM accepted referral  <i>MH_RefAccept</i>	Yes (1) No (0)  NA (ONLY if MH 10 ≠ 1) (-8)	
<b>MH 12)</b> SM made comments related to referral (note: typically refusal but could be made even if accept)  <i>MH_RefSMComment</i> *Note: If there is no Check Box that captures SM's referral comment, mark "Yes" to MH 12 and write in comment in Notable Events (Sum 15a).	Yes (1) No (0)  NA (ONLY if MH 10 ≠ 1) (-8)	<b>MH 12a)</b> Please check all that apply :  <i>Fear of career / Already in Tx /</i> <i>Waiting for a scheduled appointment / Time off work /</i> <i>Doesn't want it in record / Doesn't think Tx will help /</i> <i>Already has social support / Thinks it will resolve with time / No health care coverage or too expensive</i>

*MHSub\_RefCareer / MHSub\_RefInTx / MHSub\_RefWaitApt / MHSub\_RefTimeWrk / MHSub\_RefNo Recrd / MHSub\_RefTxNoHlp / MHSub\_RefSocSupprt / MHSub\_RefResolvTime / MHSub\_RefCoverage*

**Alcohol: Qx 13  
Drinking**

*Coder note: Mentioned means any words/discussion consistent with this concern by anyone. If provider mentioned the concern, it is not necessary for the SM to respond.*

	Mentioned	If mentioned:
<b>Alc 1)</b> Was Alcohol mentioned at any time during the interview  <i>Alc_Mention</i>  <b>***If SM is female, mark answer to abstaining from alcohol while pregnant question (Alc 3).</b>	Yes (1) No (0)	<b>Alc 1a)</b> Who mentioned Alcohol first? Provider (1) AlcSub_Mention SM (2) NA (ONLY If Alc 1 = 0) (-8)
<b>Alc 2)</b> Provider repeated original SM responses to any/all questions related to Alcohol use as marked on DD2900. <i>Note: does not have to be verbatim; looking for language consistent with answer choices</i>  <i>Alc_AnsRepeat</i>	Yes (1) No (0)	
<b>Alc 3)</b> There was an indication that there was a positive response to at least one question for Alcohol use  <i>Alc_Positive</i>  <b>***If SM is female, mark answer to abstaining from alcohol while pregnant question (Alc 3).</b>	Yes (1) No (0)  NA (ONLY if Alc 1 = 0) (-8)	
<b>Alc 4)</b> If the SM was a woman, did the provider urge her to abstain from drinking should she become pregnant  <i>Alc_Abstain</i>	Yes (1) No (0) Male SM (-8)	

**Answer Elaboration if the Area of Interest was Indicated Either in Original DD 2900 or As Clarified in Discussion**

<b>Alc 5)</b> Provider asked questions to clarify/learn more/understand SM's response(s) about Alcohol use  <i>Alc_Elab</i>	Yes (1) No (0)  NA (ONLY if Alc 3 ≠ 1) (-8)	
<b>Alc 6)</b> Provider asked if Alcohol use was related to deployment or the information was volunteered by the SM  <i>Alc_Deploy</i>	Yes (1) No (0)  NA (ONLY if Alc 3 ≠ 1) (-8)	
<b>Alc 7)</b> Provider asked if SM had seen a provider for concern about Alcohol use or the information was volunteered by the SM  <i>Alc_Treatment</i>	Yes (1) No (0)  NA (ONLY if Alc 3 ≠ 1) (-8)	

*Note: In other sections there is a question about whether documentation was mentioned. This does not seem viable for Alcohol concerns.*

**Provider Education Provision**

<b>Alc 8)</b> Provider made statements that others have experienced and/or marked a positive response to the area of Alcohol use concern  <i>Alc_OthExp</i>	Yes (1) No (0)	<b>Alc 8a)</b> Who did the provider reference Other SMs AlcSub_OthExpSM General population AlcSub_OthExpPop Provider him/herself AlcSub_OthExpSelf
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		Note: In other sections there was a question below about whether the provider was destigmatizing or minimizing concern. The wording to this question was altered and it was moved to be a gateway question Alc 9.
<b>Alc 9)</b> Provider minimized the alcohol concern by indicating the alcohol guidelines / DoD / cut off was very strict.  <i>Alc_DestigMinimiz</i> <i>Note: This question is different than other sections because there is no need to go through a gateway question.</i>	Yes (1) No (0)	
<b>Alc 10)</b> Provider gave verbal education information about Alcohol use (e.g., facts/figures, likely causes/symptoms/course/duration/severity, useful treatments/interventions/good people to help)  <i>Alc_Educ</i>	Yes (1) No (0)	
<b>Alc 11)</b> Provider offered to give a handout/pamphlet or other resources (e.g., website) to the SM about Alcohol use <i>Alc_Resource</i>	Yes (1) No (0)	
<b>Referral Talk</b>		
<b>Alc 12)</b> Any mention of recommendation/need/desire for further evaluation and/or treatment for Alcohol and/or Alcohol concern due to exposure, this does NOT include MOS  <i>Alc_RefMen</i>	Yes (1) No (0)  NA (ONLY if Alc 3 ≠ 1) (-8)	<b>Alc 12a)</b> Who mentioned referral first? Provider (1) <i>AlcSub_RefMen</i> SM (2) NA (ONLY if Alc 12 ≠ 1) (-8)
<b>Alc 13)</b> SM accepted referral  <i>Alc_RefAccept</i>	Yes (1) No (0)  NA (ONLY if Alc 12 ≠ 1) (-8)	
<b>Alc 14)</b> SM made comments related to referral (note: typically refusal but could be made even if accept)  <i>Alc_RefSMComment</i> <i>*Note: If there is no Check Box that captures SM's referral comment, mark "Yes" to Alc 14 and write in comment in Notable Events (Sum 15a).</i>	Yes (1) No (0)  NA (ONLY if Alc 12 ≠ 1) (-8)	<b>Alc 14a)</b> Please check all that apply :  Fear of career / Already in Tx / Waiting for a scheduled appointment / Time off work / Doesn't want it in record / Doesn't think Tx will help / Already has social support // Thinks it will resolve with time / No health care coverage or too expensive

AlcSub\_RefCareer / AlcSub\_RefInTx / AlcSub\_RefWaitApt / AlcSub\_RefTimeWrk / AlcSub\_RefNo Recrd / AlcSub\_RefTxNoHlp / AlcSub\_RefSocSupprt / AlcSub\_RefResolvTime / AlcSub\_RefCoverage

**Self-Referral: Qx 15-18**

*Coder note: Mentioned means any words/discussion consistent with this concern by anyone. If provider mentioned the concern, it is not necessary for the SM to respond.*

	Mentioned	If mentioned:
<b>SelfRef 1)</b> Any of the Self-Referral questions mentioned at any time during the interview  <i>SelfRef_Mention</i>	Yes (1) No (0)	
<b>SelfRef 2)</b> Provider repeated original SM responses to any/all questions related to Self-Referral as marked on DD2900. <i>Note: does not have to be verbatim; looking for language consistent with answer choices</i>  <i>SelfRef_AnsRepeat</i>	Yes (1) No (0)	
<b>SelfRef 3)</b> There was an indication that there was a positive response to at least one Self-Referral question  <i>SelfRef_Positive</i>	Yes (1) No (0)  NA (ONLY if SelfRef 1 = 0) (-8)	

**Answer Elaboration if the Area of Interest was Indicated Either in Original DD 2900 or As Clarified in Discussion**

<b>SelfRef 4)</b> Provider asked questions to clarify/learn more/understand SM's response to Self-Referral  <i>SelfRef_Elab</i>	Yes (1) No (0)  NA (ONLY if SelfRef 3 ≠ 1) (-8)	
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**Provider Education Provision**

<b>SelfRef 5)</b> Provider gave verbal education information about Self-Referral (e.g., <i>useful treatments/interventions/good people to help</i> )  <i>SelfRef_Educ</i>	Yes (1) No (0)	
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**Referral Talk**

<b>SelfRef 5)</b> Any mention of recommendation/need/desire for further evaluation and/or treatment, this does NOT include MOS  <i>SelfRef_RefMen</i>	Yes (1) No (0)  NA (ONLY if SelfRef 3 ≠ 1) (-8)	<b>SelfRef 5a)</b> What area was this in reference to, check all that apply: Physical <i>SelfRef_RefPhys</i> TBI <i>SelfRef_RefTBI</i> Mental health/Alcohol <i>SelfRef_RefMHAlc</i> Other <i>SelfRef_RefOther</i> Nothing specific <i>SelfRef_RefNotSpec</i> Not clear <i>SelfRef_RefNotClear</i> <i>* Note: If the provider mentions the self referral questions and referral talk comes out of it, the coder is to refer back to the specific area of interest and fill out the corresponding "Referral Talk" section. If the SM has not already mentioned referral for this area of interest, then the provider will be coded as mentioning referral for this topic first</i>
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**Risk Assessment**

*Coder mark the following if mentioned in the discussion. Circle the appropriate response*

<p><b>Risk 1)</b> Provider asked about possible harm to self and/or suicide (“Over the PAST MONTH, have you been bothered by thoughts that you would be better off dead or of hurting yourself in some way?” Note: provider does NOT need to read it verbatim)</p> <p><i>Risk_Self</i></p>	<p>Yes (1) No (0)</p>	<p><b>Risk 1a)</b> Mention time frame of “last month”/30 days Yes (1) <i>RiskSub_SelfTime</i> No Mention of Time (0) Wrong time indicated (2) NA (ONLY if Risk 1 = 0) (-8)</p> <p><b>Risk 1b)</b> Mention bothered by thoughts of suicide and/or harming yourself <i>RiskSub_SelfIntent</i> Yes (1) No (0) NA (ONLY if Risk 1 = 0) (-8)</p>
<p><b>Risk 2)</b> Provider asked about possible harm to others (“Since return from your deployment, have you had thoughts or concerns that you might hurt or lose control with someone?” Note: provider does NOT need to read it verbatim)</p> <p><i>Risk_Others</i></p>	<p>Yes (1) No (0)</p>	<p><b>Risk 2a)</b> Mention time frame “since return from deployment” <i>RiskSub_OthersTime</i> Yes (1) No Mention of Time (0) Wrong time indicated (2) NA (ONLY if Risk 2 = 0) (-8)</p> <p><b>Risk 2b)</b> Mention bothered by thoughts of losing control and/or harming someone else Yes (1) <i>RiskSub_OthersIntent</i> No (0) NA (ONLY if Risk 2 = 0) (-8)</p>
<p><b>Risk 3)</b> Provider asked the risk assessment questions as two distinct questions</p> <p><i>Risk_AskSeparate</i></p>	<p>Yes (1) No (0)</p> <p>NA (ONLY if Risk 1 = 0 and/or Risk 2 = 0) (-8)</p>	
<p><b>Risk 4)</b> SM indicated a response other than No to either/both risk assessment questions</p> <p><i>Risk_Yes</i></p>	<p>Yes (1) No (0)</p> <p>NA (ONLY if Risk 1 = 0 AND Risk 2 = 0) (-8)</p>	<p><b>Risk 4a)</b> Provider asked at least one additional question to clarify a positive risk assessment response. Yes (1) <i>Risk_Probe</i> No (0) NA (ONLY if Risk 4 ≠ 1) (-8)</p>

**Generally About the Interview**

Coder mark the following if mentioned in the discussion. Circle the appropriate response

<p><b>Sum 1)</b> Was there any mention of questions or sub questions not answered or skipped</p> <p><i>Sum_SkipQx</i></p>	<p>Yes (1) No (0)</p>	<p><b>Sum 1a)</b> Which of the following:</p> <p><i>SumSub_SkipQxIntent</i></p> <p>Provider asked and SM intended to skip (1)  Provider asked and SM did NOT intend to skip (2)  SM volunteered intent and did intend to skip (3)  SM volunteered and did NOT intend to skip (4)  There was no indication of intent to skip (0)  NA (ONLY if Sum 1 = 0) (-8)</p> <p><b>Sum 1b)</b> Did the SM complete this question during the interview</p> <p><i>SumSub_SkipQxComplete</i></p> <p>Yes (1)  No (0)  NA (ONLY if Sum 1 = 0) (-8)</p>
<p><b>Sum 2)</b> SM indicated that their original response from DD2900 was no longer current (presently inaccurate)</p> <p><i>Sum_Amend</i></p>	<p>Yes (1) No (0)</p>	<p><b>Sum 2a)</b> Provider specifically said that s/he would amend/modify/clarify the form</p> <p>Yes (1)  <i>SumSub_Amend</i>  No (0)  NA (ONLY if Sum 2 = 0) (-8)</p>
<p><b>Sum 3)</b> Provider gave verbal education about military policies, that are not related to the PDHRA process (e.g., clearance issues when mental health has been reported, career advancement)</p> <p><i>Sum_EdPolicy</i></p>	<p>Yes (1) No (0)</p>	
<p><b>Sum 4)</b> Provider gave verbal education about the PDHRA process (eg. why the PDHRA was created, that everyone must go through an interview)</p> <p><i>Note: This question is about the normal process that EVERYONE would go through. Including talk about it being part of the SM's medical record and the SM receiving a copy in the mail in 10 days.</i></p> <p><i>Sum_EdProcess</i></p>	<p>Yes (1) No (0)</p>	
<p><b>Sum 5)</b> Provider gave verbal education about healthcare benefits and/or how to access benefits (e.g., Their benefits have been extended from 2 to 5 years), MOS talk does NOT count nor does appointment talk</p> <p><i>Note: This question is about the benefits everyone receives or specific information about the referral process.</i></p> <p><i>Sum_EdBenefit</i></p>	<p>Yes (1) No (0)</p>	

<p><b>Sum 6)</b> Provider summarized their concerns and/or what their intent for referral was</p> <p><i>Sum_RefSummary</i></p>	<p>Yes (1) No (0)</p> <p>NA (ONLY if there was no referral talk) (-8)</p>	
<p><b>Sum 7)</b> Provider told the SM that they are the ones who need to initiate the appointment (MOS only applies to question if the provider specifically says that the SM needs to make an appointment with MOS).</p> <p><i>Sum_IntiateRef</i></p>	<p>Yes (1) No (0)</p> <p>NA (ONLY if there was no referral talk) (-8)</p>	
<p><b>Sum 8)</b> Provider gave contact information for referral and/or MOS NOTE: MOS contact information can be given for either specific referral or just general information.</p> <p><i>Sum_RefContct</i></p>	<p>Yes (1) No (0)</p> <p>NA (ONLY if there was no referral talk AND MOS was not mentioned) (-8)</p>	<p><b>Sum 8a)</b> Check all that apply:</p> <p>Individual name <i>SumSub_RefContctIndiv</i> Facility name <i>SumSub_RefContctFacil</i> Phone number <i>SumSub_RefContactPhone</i> Internet address <i>SumSub_RefContctWeb</i></p>
<p><b>Sum 9)</b> Provider mentioned opportunity to speak with an LHI BH consultant</p> <p><i>Sum_BHConsult</i></p>	<p>Yes (1) No (0)</p>	<p><b>Sum 9a)</b> SM accepted offer <i>SumSub_BHConsultAccept</i> Yes (1) No (0) NA (ONLY if Sum 9 = 0) (-8)</p> <p><b>Sum 9b)</b> If accepted, when was SM transferred? <i>SumSub_BHConsultTransf</i> During the call as an emergency (1) After the assessment was over (2) NA (ONLY if Sum 9 = 0) (-8)</p>
<p><b>Sum 10)</b> The provider gave verbal general education (e.g., Battlemind), NOT MOS or related to any specific area of interest</p> <p><i>Sum_GenEduc</i></p>	<p>Yes (1) No (0)</p>	

<b>Sum 11)</b> Provider mentioned MOS  <i>Sum_MenMOS</i>	Yes (1)  No (0)	<b>Sum 11a)</b> What area was this in reference to (check all that apply): <i>Physical</i> <i>SumSub_RefPhys</i> <i>TBI</i> <i>SumSub_RefTBI</i> <i>Mental health/Alcohol</i> <i>SumSub_RefMHAlc</i> <i>Other</i> <i>SumSub_RefOther</i> <i>Nothing specific</i> <i>SumSub_RefNotSpec</i> <i>Not clear</i> <i>SumSub_RefNotClear</i>
<b>Sum 12)</b> MOS and/or other referral offered for SM problem NOT linked to subscale areas (eg. <i>Tax help, child service</i> )  <i>Sum_OtherRef</i>	Yes (1)  No (0)	
<b>Sum 13)</b> Provider disclosed personal demographic information  <i>Sum_ProvInfo</i>	Yes (1)  No (0)	<b>Sum 13a)</b> Please check all that apply: <i>Military experience</i> <i>SumSub_ProvInfoMilExp</i> <i>Clinical experience (e.g., specialty area, time practicing) during introduction</i> <i>SumSub_ProvInfoClinExp</i> <i>Age</i> <i>SumSub_ProvInfoAge</i> <i>Gender</i> <i>SumSub_ProvInfoGender</i> <i>Where s/he lives</i> <i>SumSub_ProvInfoLive</i> <i>Personal Story (e.g., about someone they knew and/or themselves)</i> <i>SumSubProvInfoStory</i> <i>Other _____</i> <i>SumSub_ProvInfoOther</i> <i>Note: Clinical experience does not include title (ie. PA).</i> <i>For gender to be marked the provider must actually reference their gender, it cannot be implied (ie. any of these words would indicate that gender should be marked: male, female, woman, man, chick, dude, girl, boy --- HOWEVER, "Giving birth was very hard on my body" would NOT count)</i>
<b>Sum 14)</b> Interview was completed  <i>Sum_Complete</i>	Yes (1)  No (0)	<b>Sum 14a)</b> If no, why not:  <i>Dropped call</i>  <i>SumSub_CompleteDrop</i> <i>SM needed to end call</i>  <i>SumSub_CompleteSMEnd</i> <i>Provider needed to end call</i>  <i>SumSub_CompleteProvEnd</i> <i>SM was transferred to someone else before assessment complete (including LHI BH consultant)</i>  <i>SumSub_CompleteTransfer</i>
<b>Sum 15)</b> Any notable events  <i>Sum_NoteEvent</i>	Yes (1)  No (0)	<b>Sum 15a)</b> Describe here: <i>SumSub_NoteEvent</i>

Coder Date: 08/\_\_\_\_/09 (*CoderDate*)  
(*CallID*)

Initials: \_\_\_\_\_ (*CoderInit*)

Call ID #: \_\_\_\_\_

<b>Sum 16)</b> Any difficulty coding  <i>Sum_DiffCode</i>	Yes (1)  No (0)	<b>Sum 16a)</b> Why?  Couldn't understand <i>SumSub_DiffCodeUnderstand</i> Difficult to hear <i>SumSub_DiffCodeHear</i> Other _____ <i>SumSub_DiffCodeOther</i> (Note: mark specific questions where applicable)
<b>Sum 17)</b> Team should listen to this interview  <i>Sum_Listen</i>	Yes (1)  No (0)	<b>Sum 17a)</b> Mark all that apply (your opinion): Provider established rapport: skilled/not skilled Provider elicited self-disclosure: skilled/not skilled SM reluctant but accepted referral SM refused referral Other _____

*SumSub\_ListenRappSkil / SumSub\_ListenRappNoSkil*  
*SumSub\_ListenSDSkil / SumSub\_ListenSDNoSkil*  
*SumSub\_ListenRelucRef*  
*SumSub\_ListenRefuseRef*  
*SumSub\_ListenOther*

## **Appendix Y: PDHRA Clinician Interview**

**PDHRA Clinician Interview**

**Interviewer Name:** \_\_\_\_\_ **ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time Start:** \_\_\_\_\_ **Stop:** \_\_\_\_\_

**Prior to Interview Start**

Thank you for making time for us to meet today. Your comments and opinions will be extremely useful to us as we conduct our evaluation of the military's health risk appraisal processes for returning Service Members. As a part of this larger evaluation, we're hoping to learn more about the portion of the PDHRA conducted by health care providers. Just a few comments before we get started.

We estimate this interview will last about 45 minutes. Your participation is completely voluntary, and you are free to withdraw at any time. You are also free to skip any questions. So that we can keep this interview as anonymous as possible, we will refrain from using your name. We ask that you refrain from using any Service Member names in the course of the interview. Please use a pseudonym in any sample cases that you might share.

I will be taking written notes during the interview. However, in order to better capture what you are saying, I'd like to record the interview with a digital audio-recorder. The recording will be transcribed after I return to the office. The transcription and my written notes will not contain any information that would identify you. The digital audio recordings will be stored on a password-protected computer. Any written documents related to this interview will be stored in a locked cabinet at Vanderbilt University. Once our evaluation is completed, we will destroy the audio recordings and interview notes. For any written documents that result from this interview, we will use pseudonyms to protect your identity.

Do I have your permission to audio-record this interview? \_\_\_\_\_ Yes \_\_\_\_\_ No

Can you tell me how long you've been conducting PDHRA assessments? \_\_\_\_\_ (# mo)

About how many hours per week do you spend conducting PDHRA assessments? \_\_\_\_\_ (# hrs/wk)

What is your professional background?

\_\_\_\_\_ Physician Assistant (PA)  
\_\_\_\_\_ Nurse Practitioner (NP)  
\_\_\_\_\_ Other: \_\_\_\_\_

How long have you been a licensed health care provider? \_\_\_\_\_

Is there a particular Service Component whose SMs you screen?

If yes, \_\_\_\_\_ Army AD \_\_\_\_\_ ARNG \_\_\_\_\_ USAR  
\_\_\_\_\_ Navy AD \_\_\_\_\_ Navy Reserve  
\_\_\_\_\_ Marine AD \_\_\_\_\_ Marine Reserve  
\_\_\_\_\_ AF AD \_\_\_\_\_ AF Reserve \_\_\_\_\_ Air Guard

What is your role? Are you paid as a:

\_\_\_\_\_ Military provider

\_\_\_\_ Civilian provider paid by the government

\_\_\_\_ Civilian provider paid by an outside company

### Standard Operating Procedures

**First, I'd like you to walk me through an assessment from beginning to end.**

**Is there any preparation you do prior to an assessment? If yes, describe.**

*Prompts:*

*Review self-report (SM section)*

*Variation based on apparent concerns*

Is there any information you wish were available for review to help with preparation (e.g., PHA/DD Form 2795, PDHA/DD Form 2796, or other health records)? If yes, would time be available to review the information? How would you use the information?

**Now let's focus on the assessment itself.**

*Prompts for questions below: (review of health history; note confirm or modify/clarify answers; assess potential for harm, document concerns or conditions; recommend referral and follow-up; provide education; length)*

**What are your goals in conducting the assessment portion?**

**What do you look for in the self-report (SM section) to guide your interview?**

Do you go through the self-report in the order it appears, or do you use other methods to guide your conversation with Service Member (SM)? *(yes responses first, etc...)*

Are there any algorithms you use when reviewing the self-report to determine need for a referral?

**In your conversation with the SM, how often do you find their responses during the interview differ from what was reported on the DD Form 2900 (i.e., they indicate a concern to you but did not on the form, or indicated a concern on the form that they deny or downplay during the interview?)**

How do you help increase SMs awareness of behaviors, thoughts, and feelings that should be considered symptoms of a potential disorder?

How do you assist SMs in recognizing that s/he might be experiencing these?

**On page 4 of the PDHRA, what does it mean when you mark ‘Screening results modified, amended, clarified during interview’? Do you ever modify the self-report section? Do you always report when a modification is made?**

**Now, I have a few questions about your perceptions of the Service Member. During your conversations with the SMs, what percentage of the SMs do you feel are not forthcoming about their problems and concerns listed on the DD Form 2900? In your interview?**

**What do you think are the important factors that may influence the SM to disclose health problems on the form? During the interview?**

*Prompts:*

*Physical*

*Mental*

**What percentage directly express concerns about revealing information on the PDHRA? (*How many are apprehensive about things being written down, who reads the PDHRA?*)**

What types of concerns do they express? (*stigma, concerns about job, concerns about lack of confidentiality, minimizing, denial, shame*)

If you suspect the SM is not disclosing, what do you do?

What statements do you tend to use to get a SM to open up to you?

**I have a few questions about referrals.**

Based on the form only, that is before the interview, can you tell that a referral is likely to be indicated? If yes, how can you tell (what things in the form influence your perception)?

What percentage of cases do you see where you end up making a referral, but it wasn’t immediately clear from the self-report sections? Is there anything that makes these cases stand out? (*what types of problems/issues were present?*)

**Tell me about a case where the clinical interview really added to the case--where a referral was not clearly indicated from the self-report, but you determined there was a need for one based on your assessment.**

What factors influence your decision on the type of referral to make (to whom a referral is made)? (*local access/availability, guidelines*)

Sometimes SMs request that a clinician does not make or document a referral, even if one seems indicated.

- About what percentage of the cases does this happen?
- What do you do when this happens? (*further probing, alert for denial, minimizing, fears for career repercussions, shame, stigma*)
- If a referral ends up not being made, even though you thought it should have been made, is there any way to document it?
- Is this your personal procedure or a guideline from training?

**A few other questions about the PDHRA process.**

Do you ever provide health advice or information to the SMs? If yes, what types of information or advice do you provide?

Do you refer to BattleMind II or any other deployment cycle education when speaking to SMs? If so, could you give me an example?

Do you ever feel rushed in conducting assessments? If yes, describe.

*Prompts:*

*SMs waiting*

*Other duties*

<b>Training</b>
-----------------

**Now I have a few questions about training.**

**Have you received any training for conducting PDHRA assessments? If yes, describe.**

*Prompts:*

*One-time or ongoing*

*Content*

*Format (workshop/classroom, manuals, shadowing, role play, mentorship)*

*Who delivered*

*When was last training received*

Is there any other training you wish you had received?

Are there things you have learned on the job that you think should be included in training new interviewers? (e.g., what makes you effective at doing the PDHRA?) If yes, what?

Is there any regular supervision or case review of the clinician interview process? If yes, describe.

*Prompts:*

*Case consultation (immediate, regularly scheduled)*

**Do you receive any feedback on your performance? If yes, what and how?**

**Do you know if you had made an appropriate referral? If yes, how?**

**Interview Close**

What is the current DOD policy with regard to requiring military personnel to disclose any service-related treatment that they have received when they apply for security clearance?

*If aware of new DoD policy:*

- (1) How is this communicated to SMs?
- (2) How, if at all, do you think this will influence how SMs report problems or concerns on the PDHRA (both self-report and clinician assessment)? Will this be different for officers versus enlisted SMs?

*If not aware of new DoD policy:*

- (1) In light of this policy, what could be done to encourage SMs to openly report problems or concerns on the PDHRA?
- (2) Is this different for officers versus enlisted SMs?

Have you, as a PDHRA provider, ever shared your personal experience with service-related mental health problems or treatment, as a way of encouraging help-seeking in SMs?

At your installation, what are the biggest strengths regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this strength specific to your installation or does it generalize to other installations?

At your installation, what are the biggest weaknesses regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this weakness specific to your installation or does it generalize to other installations?

What would be the most effective in reducing or eliminating those weaknesses?

**Is there anything that could change in the PDHRA process to make your time better spent?**

**Any questions or issues that you think are important but we have not talked about so far?**

## **Appendix Z: PDHRA Program Manager Interview**

**PDHRA Program Manager Interview**

**Interviewer Name:** \_\_\_\_\_ **ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time Start:** \_\_\_\_\_ **Stop:** \_\_\_\_\_

**Installation:** \_\_\_\_\_ **City/State:** \_\_\_\_\_

**# People Interviewed:** \_\_\_\_\_

**Prior to Interview Start**

Thank you for making time for us to meet today. Your comments and opinions will be extremely useful to us as we conduct our evaluation of the military's health risk appraisal processes for returning Service Members. As a part of this larger evaluation, we're hoping to learn more about how the PDHRA process is implemented at your installation. Just a few comments before we get started.

We estimate this interview will last about 45 minutes. Your participation is completely voluntary, and you are free to withdraw at any time. You are also free to skip any questions. So that we can keep this interview as anonymous as possible, we will refrain from using your name. We ask that you refrain from using any Service Member names in the course of the interview. Please use a pseudonym in any sample cases that you might share.

I will be taking written notes during the interview. However, in order to better capture what you are saying, I'd like to record the interview with a digital audio-recorder. The recording will be transcribed after I return to the office. The transcription and my written notes will not contain any information that would identify you. The digital audio recordings will be stored on a password-protected computer in our office at Vanderbilt University. Any written documents related to this interview will be stored in a locked cabinet at Vanderbilt. Once our evaluation is completed, we will destroy the audio recordings and interview notes. For any written documents that result from this interview, we will use pseudonyms to protect your identity.

Person#1: Mgr

Person#2: Asst Mgr

Do I have your permission to audio-record this interview?

Person#1: \_\_\_\_\_ Yes \_\_\_\_\_ No      Person#2: \_\_\_\_\_ Yes \_\_\_\_\_ No

When you have an event scheduled, about how many hours per week do you spend managing the PDHRA process?

Person#1: \_\_\_\_\_ (# hrs/wk)

Person#2: \_\_\_\_\_ (# hrs/wk)

Can you tell me how long you've been managing the PDHRA process?

Person#1: \_\_\_\_\_ (# mo)

Person#2: \_\_\_\_\_ (# mo)

If less than 6 months: While we will be asking mainly about the most recent PDHRA procedures at your installation, we are also hoping to learn more about the history of the PDHRA. Could you help us with that (are you familiar with events prior to your arrival)?    Yes    No    If no, who could help us? \_\_\_\_\_

### A. General PDHRA Background

1. What month and year did the PDHRA process start at your installation? (mm)\_\_\_\_/(yy)\_\_\_\_\_
2. Here (or at nearest MTF/clinic) are there any special programs in place to increase the use of behavioral health care in primary care settings? For example, the Army has special training for primary care providers called RESPECT-MIL. The Air Force has a program to place behavioral health (BH) consultants in primary care settings. If yes, do you know when they started?
3. When did you begin using the most recent version of the DD Form 2900 (Jan 2008 version)?  
\_\_\_\_\_ date
4. How is the self-report section of the DD Form 2900 typically completed by Service Members (SM)?  
(*group/individual, computer/telephone/paper&pencil, on/off duty*)
5. How is the clinician assessment (CA) section of the DD Form 2900 typically conducted? (*telephone/in person, group/individual, all SMs/+ responses only*)
6. Where is the PDHRA typically completed? (*same location as Readiness Processing, same location as In/Out Processing, MTF/Primary care clinic, Cafeteria or gym, stand-alone, other*)
7. Is the location for the PDHRA a fixed site?  
If yes, for how long?  
If no, how is the location determined?
8. Please take a moment to think about the **most recent typical** PDHRA that you managed.  
Date (mm/dd/yyyy)\_\_\_\_\_
- Approximate # SMs assessed that day: \_\_\_\_\_

### B. PDHRA Implementation

The following questions are all about how the most recent typical PDHRA on (date) was implemented

1. How were SMs determined to be eligible for the PDHRA? (*Date of PDHA, other*)  
*Prompt: how often does this happen (daily, weekly, monthly, other)*
2. How were SMs notified of the need to fill out the self-report (SR) section of the DD Form 2900?  
(*service knowledge portal [AKO/NKO/AFP/GKO], Chain of Command, Both, Other*)  
Initial  
Follow-up
3. How did SMs complete the self-report section of the DD Form 2900? ((*group/individual, computer/telephone/paper&pencil, on/off duty*))
4. Were SMs required to meet with a clinician even if they only completed the demographic section of the DD Form 2900?
5. How were SMs scheduled for the clinician assessment portion of the PDHRA?  
*Prompts:*  
*Walk-in/scheduled, individual/group, unit/large group*  
*How were SMs informed?*
6. Where did SMs go for the clinician assessment? (*location, privacy, walk-in availability*)
7. How long is a typical clinician assessment?
8. Was the self-report section of the DD Form 2900 used to determine whether the SM was to have a clinician assessment or what health care provider (HCP) was assigned to do that assessment (e.g., BH specialist, traumatic brain injury (TBI), other)? If yes, describe.

9. Is there any procedure to predict acuity prior to an SM participating in the clinician assessment of the PDHRA? For example, based on prior knowledge of combat exposure for a particular unit?

10. Did the PDHRA occur at the same time as other activities? If yes, describe. (*Readiness Processing, In/Out Processing, Immunization/vision/dental/etc, Physical examinations, other*)  
*Prompts: Wait time*

11. Were there any additional protocols, programs, or personnel in place aside from those specified in policies/OPORDERS for the way the PDHRA was conducted? (*special programs, additional forms/clinical instruments, additional personnel such as BH specialist, drug & alcohol coordinator, Military OneSource, etc*). *Note for RC: VA, VAMC liaison*

### C. SM Pre-Briefing and Education

**The following questions are about any pre-briefings or deployment cycle education associated with the most recent typical PDHRA on (date).**

1. Are you aware of any deployment cycle education that is available for SMs? This could be written materials (like brochures or posters), presentations or workshops, films/videos, etc. Anything related to issues of reintegrating after deployment, like problems that might be encountered, coping or support strategies, where to seek help. It could happen at anytime since SMs returned from their last deployment. If yes, describe

*Prompts:*

*Content (PDHRA-specific; deployment cycle problems, coping, where to seek help)*

*Format (presentation/workshop, booths, written, film/video, available through service knowledge portal)*

*Opportunity for SM discussion*

*Any personnel involvement (Chain of command, other)*

*When did it occur (prior to SR, after the SR but prior to CA)*

*Any verification that SMs participated? If yes, describe*

2. Are you aware of any pre-briefings provided to SMs as part of the PDHRA process. If yes, describe

*Prompts:*

*Content (PDHRA-specific; deployment cycle problems, coping, where to seek help)*

*Format (presentation, inclusion of any other materials: written, film/video, etc. \*may overlap with question above)*

*Who led the pre-briefing (Chain of command, other)*

*When did it occur (prior to SR, after the SR but prior to CA)*

*Length (about how long)*

*Any verification that SMs participated? If yes, describe*

#### **D. Command Support**

**The following questions are all about Command support for the most recent typical PDHRA on (date).**

1. What were the responsibilities taken by the Unit Leadership (Officers and NCOs) for the PDHRA for those SMs? Please describe Officer's and NCO's responsibilities separately.

2. Is any information about individual SMs relevant to the PDHRA provided to Unit Leaders? (*compliance, problems/concerns, referrals*). If yes, describe.

3. Were the Unit Leaders involved in any pre-briefing of SMs for the PDHRA? If yes, when did this happen? Who was involved (Officer, NCO)? *\*Note may overlap with pre-briefing question above*

4. Are Unit Leaders involved in ensuring SM compliance with the PDHRA? If yes, describe. How helpful do you think this is?

#### **E. Referrals**

**The following questions are all the referral process associated with most recent typical PDHRA on (date).**

1. For SMs who received referrals from the PDHRA, is there a process in place to assist with referrals? If yes, describe

*Provide SM with contact information to set up appointment*

*Their staff makes appointment at time of PDHRA*  
*Some appointments available immediately*

What about referrals to sources outside the MTF/clinic? (*Military OneSource, Chaplain, Other*)

2. Do you verify that appointments were provided to SMs that are consistent with page 5 of the DD Form 2900? If yes, how and in what time period?

*Within 24 hours*  
*Within 7 days*  
*Within 30 days*

3. Does your installation track completion of PDHRA referrals. If yes, how?

*Prompts:*  
*Electronic record of referral completion*  
*Referrals entered into medical records system (e.g., AHLTA for Army)*  
*Any follow-up with SMs failing to keep appointments*  
*Commanders notified of referral completion*

4. Are there any guidelines, whether formal or just implied, that influence the referrals that are made through the PDHRA process? If yes, describe.

*Prompts:*  
*Joint decision with SM*  
*Type of referral (e.g., PCP instead of specialist because of long wait time; chaplain, MSource)*  
*Lack of availability of any particular specialists*  
*Noted difficulties obtaining specialty care (wait time, distance)*

## **F. Clinicians Conducting PDHRA Assessment**

**The following questions are about the health care providers (HCPs) who conducted the clinician assessment at the most recent typical PDHRA on (date).**

1. How many HCPs were available for the clinician assessment portion of the DD Form 2900?

*Approximate estimate, not exact*

2. Are there any guidelines or expectations for how many SMs can be assessed per HCP per eight hour day? If yes, describe.

*Prompts:*

*Formal/informal*

*Minimum/maximum*

3. What was the professional background of the HCPs conducting the clinician assessment? (*physician assistant (PA), nurse practitioner (NP), medical doctor (MD), BH Specialist, Other*)

4. What role(s) do the HCPs hold who conduct the clinician assessment?

*Organic? (military/civilian, contractor)*

*If organic, MTF or associated with Unit? Deployed with unit?*

*Other duties?*

*Any perceived differences in CA based on roles?*

5. What was the procedure for selecting HCPs to conduct the clinician assessment?

*Preference for role (organic, deployed, civilian; matching with SM, etc.)*

*Awareness of any opinions or concerns about the role of the assessment providers*

6. Was there any specialized training on identifying signs and symptoms of physical or mental problems related to combat experience available to assist HCPs? If yes, describe

*Documentation of HCP participation in training*

*OPORDERS, Policies, Local-developed*

7. Is the HCP given guidance in the form of specific criteria or algorithms that they might use to determine whether a SM should receive a referral? For example, guidance on specific responses that would indicate the need for further evaluation. If yes, describe.

*Documentation of HCP participation in training*

*Can we get copies of training materials*

8. Was there any specialized training provided in how to complete the clinician section of the DD Form 2900? If yes, describe.

*Documentation of HCP participation in training*

9. Are HCPs provided with any feedback regarding their performance in the PDHRA process? If yes, describe. (*formal/informal, performance evaluation*)

## **G. Utilization Management and Reporting**

**The following questions are about utilization management and reporting associated with the most recent typical PDHRA on (date).**

1. Is there a process for capturing how many PDHRAs are completed? If yes, describe.

*Prompts:*

*Tracking of SMs completed (SR, CA)*

*Tracking of SMs referred*

*How often?*

2. Is there a process for reviewing SM compliance? If yes, describe.

*Prompts:*

*Individual f-up for SMs not attending group events/missing appointments*

*Follow-up for SMs past the window*

*How often?*

3. What is the current compliance rate?

*Prompts:*

*Date range*

*How calculated (numerator, denominator)*

4. Are there any mechanisms in place for regular reporting of PDHRA-related information, such as compliance rates or referrals? If yes, describe.

*Prompts:*

*Reports (to whom, how often, content)*

*Meetings (who involved, how often, content)*

*Follow-up/action steps*

5. Is any information related to the PDHRA (and PDHA) used to manage health care services available to SMs in general? For example, if a large percentage of SMs were indicating sleep problems on the PDHA or PDHRA, using that information to put resources into a sleep disorder clinic. If yes, describe.

## H. PDHA Review

**The following questions are about the PDHA (post-deployment health assessment) associated with the most recent typical PDHRA on (date).**

1. Are there any procedures in place to trigger PDHRAs for ill/wounded/injured SMs who did not have a PDHA? If yes, describe

*Prompts: WTUs*

2. Is the PDHA available to the HCPs who conduct the PDHRA clinician assessment? If yes, describe.

3. Some installations repeat PDHAs when SMs return from deployment, even if it might have been completed in theater. Do you know if this occurs at your installation? If yes, describe.

*Prompts: Problems with access (e.g., paper copies)*

## I. Past Year Differences

**Now, I'd like you to switch from thinking of the most recent typical event and think back over the past YEAR.**

1. Have there been any big differences in how the PDHRA used to be implemented, compared to what we've just talked about?

2. Have there been any big differences in how pre-briefings and deployment cycle education used to happen, compared to what we've just talked about?

3. Have there been any big differences in how command support used to happen, compared to what we've just talked about?

4. Have there been any big differences in how referrals used to happen, compared to what we've just talked about?

5. Have there been any big differences related to the health care providers, compared to what we've just talked about?

6. Have there been any big differences in how utilization management and reporting used to happen, compared to what we've just talked about?

#### **J. General Barriers and Facilitators – Interview Close**

1. What is the current DOD policy with regard to requiring military personnel to disclose any service-related treatment that they have received when they apply for security clearance?

*If aware of new DoD policy:*

- (3) How is this communicated to SMs?
- (4) How, if at all, do you think this will influence how SMs report problems or concerns on the PDHRA (both self-report and clinician assessment)? Will this be different for officers versus enlisted SMs?

*If not aware of new DoD policy:*

- (3) In light of this policy, what could be done to encourage SMs to openly report problems or concerns on the PDHRA?
- (4) Is this different for officers versus enlisted SMs?

2. Have you, as a PDHRA Program Manager, ever shared your personal experience with service-related mental health problems or treatment, as a way of encouraging help-seeking in SMs?

3. At your installation, what are the biggest strengths regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this strength specific to your installation or does it generalize to other installations?

4. At your installation, what are the biggest weaknesses regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this weakness specific to your installation or does it generalize to other installations?

What would be the most effective in reducing or eliminating those weaknesses?

5. Is there anything that could change in the PDHRA process to make your time better spent?

6. Any questions or issues that you think are important but we have not talked about so far?

7. Would it be possible to have copies of the materials that you mentioned in this interview? If yes, I will put together a list of those materials and email them to you.

## **Appendix AA: Commander/Senior NCO Interview**

**Commander/Senior NCO Interview**

**Interviewer Name:** \_\_\_\_\_ **ID:** \_\_\_\_\_

**Date:** \_\_\_\_\_ **Time Start:** \_\_\_\_\_ **Stop:** \_\_\_\_\_

**Prior to Interview Start**

Thank you for making time for us to meet today. Your comments and opinions will be extremely useful to us as we conduct our evaluation of the military's health risk appraisal processes for returning Service Members. As a part of this larger evaluation, we're hoping to learn more about how the PDHRA has influenced military readiness and about your role in the PDHRA process. Just a few comments before we get started.

We estimate this interview will last about 20 minutes. Your participation is completely voluntary, and you are free to withdraw at any time. You are also free to skip any questions. So that we can keep this interview as anonymous as possible, we will refrain from using your name. We ask that you refrain from using any Service Member names in the course of the interview. Please use a pseudonym in any sample cases that you might share.

I will be taking written notes during the interview. However, in order to better capture what you are saying, I'd like to record the interview with a digital audio-recorder. The recording will be transcribed after I return to the office. The transcription and my written notes will not contain any information that would identify you. The digital audio recordings will be stored on a password-protected computer. Any written documents related to this interview will be stored in a locked cabinet at Vanderbilt University. Once our evaluation is completed, we will destroy the audio recordings and interview notes. For any written documents that result from this interview, we will use pseudonyms to protect your identity.

Do I have your permission to audio-record this interview? \_\_\_\_ Yes \_\_\_\_ No

What is your military rank? \_\_\_\_\_

What is your position? \_\_\_\_\_

(officers only) Are you a commanding officer or staff officer? \_\_\_\_\_

How long have you been in this position? \_\_\_\_\_

How many Service Members serve under you? \_\_\_\_\_

Service Component:	_____ Army AD	_____ ARNG	_____ USAR
	_____ Navy AD	_____ Navy Reserve	
	_____ Marine AD	_____ Marine Reserve	
	_____ AF AD	_____ AF Reserve	_____ Air Guard

**A. Perceptions of PDHRA Impact on Military Readiness**

**First, we would like to discuss military readiness.**

1. How do you typically identify Service Members (SM) who are having problems?

*Prompts:*

*Physical*

*Emotional/behavioral/family*

*Alcohol abuse*

2. Has the PDHRA influenced your ability to make those identifications? If yes, how?

3. Has the PDHRA influenced the military readiness of your unit? If yes, how?

*Prompts:*

*Commander assessment/knowledge of troop readiness*

*SM access to care*

*SM use of care*

*SM health benefits*

4. Does the PDHRA affect SM time away from duties?

*Prompts:*

*Completion of PDHRA*

*Completion of referrals*

5. What do you hear, if anything, about SM perceptions of the PDHRA?

*Prompts:*

*They do/don't support it*

*They do/don't think it increases their health readiness*

*They are/aren't honest during the assessment*

6. What are the biggest challenges you face in getting SMs to complete the PDHRA process? How do you overcome them?

*Prompts:*

*Time*

*SM's belief in process*

*SM motivation*

*Resources*

*Logistics*

**B. Commander Role in PDHRA Process**

**Now we would like to understand your role in the PDRA process.**

1. How do you know when SMs in your unit become eligible for PDHRA?

*Prompts:*

*I check (how?)*

*Am alerted by someone else*

2. Are you involved in ensuring SM compliance with completing the PDHRA process? If yes, describe.

3. Are you involved in providing any kind of introduction for the PDHRA to unit members? If yes, describe.

*Prompts:*

*Individual/group*

*Involvement*

*Timing*

*Content*

4. Do you receive any information on your unit members after they have completed the PDHRA? If yes, what information do you receive?

*Prompts:*

*SM problems/concerns on self-report*

*Information on individual referrals*

If yes, how do you use that information?

*If no – confirm*

*You do not receive any information about referrals, (who was referred, what for?)*

5. What could unit leadership do to increase SM openness on the PDHRA about problems they might be having?

*Prompts:*

*Pre-briefing/education*

*Encouragement*

*Scheduling during other activities*

*Have you had the opportunity to do any of those things?*

6. Last summer the DoD policy changes so that military personnel are no longer required to disclose any service-related treatment that they have received when they apply for security clearance. Were you aware of this?

*If yes (aware of new DoD policy):*

- (5) Is this communicated to SMs?
- (6) How, if at all, do you think this will influence how SMs report problems or concerns on the PDHRA (both self-report and clinician assessment)? Will this be different for officers versus enlisted SMs?

*If no (not aware of new DoD policy):*

- (5) In light of this policy, what could be done to encourage SMs to openly report problems or concerns on the PDHRA?
- (6) Is this different for officers versus enlisted SMs?

7. Have you, as a leader, ever shared your personal experience with service-related mental health problems or treatment, as a way of encouraging help-seeking in your unit SMs?

### **C. Commander Knowledge Related to PDHRA**

**We would like to understand a little more about the PDHRA process and implementation.**

1. Have you received any guidance or training relevant to the PDHRA?

*Prompts:*

*Content (purpose, implementation, talking to SMs)*

*Any locally-developed*

2. Is there any other guidance you would like to see related to the PDHRA?

3. What is the general level of support for the PDHRA among other officers and NCOs?

*Prompts: why do they support or not support it?*

### **D. Interview Close**

**We would like to hear any suggestions you might have improvement.**

1. What else could be done to identify SMs in need of help who are not already under care?

2. At your installation, what are the biggest strengths regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this strength specific to your installation or does it generalize to other installations?

3. At your installation, what are the biggest weaknesses regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this weakness specific to your installation or does it generalize to other installations?

What would be the most effective in reducing or eliminating those weaknesses?

4. Is there anything that could change in the PDHRA process to make your time better spent?

5. Any questions or issues that you think are important but we have not talked about so far?

## **Appendix BB: Behavioral Health Consultant Interview**

**Behavioral Health Consultant Interview**

Interviewer Name: \_\_\_\_\_ ID: \_\_\_\_\_

Date: \_\_\_\_\_ Time Start: \_\_\_\_\_ Stop: \_\_\_\_\_

**Prior to Interview Start**

Thank you for making time for us to meet today. Your comments and opinions will be extremely useful to us as we conduct our evaluation of the military's health risk appraisal processes for returning Service Members. As a part of this larger evaluation, we're hoping to learn more about any behavioral health consultation provided to Service Members as part of the PDHRA process. Just a few comments before we get started.

We estimate this interview will last about 20 minutes. Your participation is completely voluntary, and you are free to withdraw at any time. You are also free to skip any questions. So that we can keep this interview as anonymous as possible, we will refrain from using your name. We ask that you refrain from using any Service Member names in the course of the interview. Please use a pseudonym in any sample cases that you might share.

I will be taking written notes during the interview. However, in order to better capture what you are saying, I'd like to record the interview with a digital audio-recorder. The recording will be transcribed after I return to the office. The transcription and my written notes will not contain any information that would identify you. The digital audio recordings will be stored on a password-protected computer. Any written documents related to this interview will be stored in a locked cabinet at Vanderbilt University. Once our evaluation is completed, we will destroy the audio recordings and interview notes. For any written documents that result from this interview, we will use pseudonyms to protect your identity.

Do I have your permission to audio-record this interview? \_\_\_\_\_ Yes \_\_\_\_\_ No

Can you tell me how long you've been a behavioral health consultant for the PDHRA process? \_\_\_\_\_ (# mo)

About how many hours per week do you spend providing behavioral health consultation for the PDHRA process? \_\_\_\_\_ (# hrs/wk)

What is your professional background? \_\_\_\_\_

How long have you been a licensed health care provider? \_\_\_\_\_

Is there a particular Service Component whose PDHRA referrals you manage?

If yes,	_____ Army AD	_____ ARNG	_____ USAR
	_____ Navy AD	_____ Navy Reserve	
	_____ Marine AD	_____ Marine Reserve	
	_____ AF AD	_____ AF Reserve	_____ Air Guard

### General PDHRA Behavioral Health Consultation

Could you walk me through a typical behavioral health consultation as part of the PDHRA process?

*Prompts:*

*Structured/unstructured*

*Content/purpose*

*Interaction length*

How are SMs identified for potential behavioral health consultation? (e.g., are they referred to you by the PDHRA screening clinician?)

Can SMs approach you directly for behavioral health consultation? If so, how does this occur?

What are your goals as a behavioral health consultant in the PDHRA process?

What do you think are the important factors that may influence the SM to disclose mental health problems as part of the PDHRA process (on the self-report, in the interview)?

What, if any, is your role in managing emergent problems that may happen, such as a SM exhibiting suicidal or aggressive behaviors?

What, if any, is your role in making referrals or connecting SMs to further evaluation or treatment for mental health or alcohol problems?

What, if anything, is your responsibility in communicating or documenting the behavioral health consultation that you do as part of the PDHRA process?

*Prompts:*

*Communication (providers, etc.)*

*Documentation (where, what)*

Do you ever conduct the clinician assessment portion of the PDHRA? *If yes, go to next section*

### PDHRA Assessment (if applicable)

What leads you to do the clinician assessment portion of the PDHRA?

*Prompts:*

*Rotation*

*specific individuals or units*

*What percentage of the cases routed to you would you estimate did not need to be seen by you?*

What percentage of cases do you see where you make a referral for mental or behavioral health treatment?

### Training and Guidance

Have you received any training as a behavioral health consultant in the PDHRA process? If yes, describe.

*Prompts:*

*One-time or ongoing*

*Content*

*Format (workshop/classroom, manuals, shadowing, role play, mentorship)*

*Who delivered*

*When was last training received*

Is there any other training you wish you had received?

Are there things you have learned on the job that you think should be included in training new interviewers? If yes, what?

#### **Interview Close**

What are your thoughts on the biggest barriers to SMs reporting openly about mental health problems or concerns on the PDHRA?

What would be most effective in reducing or eliminating those barriers?

What is the current DOD policy with regard to requiring military personnel to disclose any service-related treatment that they have received when they apply for security clearance?

*If aware of new DoD policy:*

(7) How is this communicated to SMs?

(8) How, if at all, do you think this will influence how SMs report problems or concerns on the PDHRA (both self-report and clinician assessment)? Will this be different for officers versus enlisted SMs?

*If not aware of new DoD policy:*

(7) In light of this policy, what could be done to encourage SMs to openly report problems or concerns on the PDHRA?

(8) Is this different for officers versus enlisted SMs?

Have you, as a behavioral health consultant, ever shared your personal experience with service-related mental health problems or treatment, as a way of encouraging help-seeking in SMs?

At your installation, what are the biggest strengths regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this strength specific to your installation or does it generalize to other installations?

At your installation, what are the biggest weaknesses regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this weakness specific to your installation or does it generalize to other installations?

What would be the most effective in reducing or eliminating those weaknesses?

Is there anything that could change in the PDHRA process to make your time better spent?

Any questions or issues that you think are important but we have not talked about so far?

## **Appendix CC: Case/Referral Manager Interview**

### *Case/Referral Manager Interview*

Interviewer Name: \_\_\_\_\_ ID: \_\_\_\_\_

Date: \_\_\_\_\_ Time Start: \_\_\_\_\_ Stop: \_\_\_\_\_

#### **Prior to Interview Start**

Thank you for making time for us to meet today. Your comments and opinions will be extremely useful to us as we conduct our evaluation of the military's health risk appraisal processes for returning Service Members. As a part of this larger evaluation, we're hoping to learn more about any referral management provided to Service Members who receive referrals through the PDHRA process. Just a few comments before we get started.

We estimate this interview will last about 20 minutes. Your participation is completely voluntary, and you are free to withdraw at any time. You are also free to skip any questions. So that we can keep this interview as anonymous as possible, we will refrain from using your name. We ask that you refrain from using any Service Member names in the course of the interview. Please use a pseudonym in any sample cases that you might share.

I will be taking written notes during the interview. However, in order to better capture what you are saying, I'd like to record the interview with a digital audio-recorder. The recording will be transcribed after I return to the office. The transcription and my written notes will not contain any information that would identify you. The digital audio recordings will be stored on a password-protected computer. Any written documents related to this interview will be stored in a locked cabinet at Vanderbilt University. Once our evaluation is completed, we will destroy the audio recordings and interview notes. For any written documents that result from this interview, we will use pseudonyms to protect your identity.

Do I have your permission to audio-record this interview? \_\_\_\_\_ Yes \_\_\_\_\_ No

Can you tell me how long you've been involved in managing referrals resulting from the PDHRA process? \_\_\_\_\_ (# mo)

Is there a particular Service Component whose PDHRA referrals you manage?

If yes,	_____ Army AD	_____ ARNG	_____ USAR
	_____ Navy AD	_____ Navy Reserve	
	_____ Marine AD	_____ Marine Reserve	
	_____ AF AD	_____ AF Reserve	_____ Air Guard

#### **PDHRA Referral Procedures**

Could you walk me through the typical referral process for a SM who is referred through the PDHRA?

*Prompts:*

*Receipt of referral (from SM, computer system, other)*

*Assistance with making appointment (how information conveyed to SM)*

*Monitoring of appointment completion (how accomplished)*

If process includes monitoring appointment completion, does this include any appointments beyond the first appointment generated by the referral? If yes, describe.

How do you manage referrals when there is more than one?

*Prompts:*

*Multiple reasons (mental/physical)*

*Multiple providers*

Do you deal with non-medical referrals such as to chaplains, Military OneSource, etc.?

Do SMs express concerns or worries about referrals they received from the PDHRA process? If yes, what kind of concerns? What do you do?

*Prompts:*

*Address concerns*

*Documentation*

*Contact with others (referring provider, etc.)*

Do SMs ever refuse referrals when they are working with you? If yes, why do you think they refuse?

If the SM does not keep an appointment what, if any, action do you take?

*Prompts*

*Contact SM*

*Contact unit commander*

Do you do anything different if the SM misses several appointments?

Is the PDHRA referral management process connected in any way to case management procedures outside the PDHRA? If so, how?

Does the PDHRA referral management process differ in any way depending on the type of referral (e.g., behavioral health, TBI, alcohol, specialty care)? If yes, describe.

How do you handle referrals for a SM who is already under care for an identified problem?

Are you aware of any reports generated on the number or type of referrals? If yes, describe.

*Prompts:*

*Content*

*To whom*

*How used*

Are you aware of any reports generated on SM compliance with referrals? If yes, describe.

*Prompts:*

*Content*

*To whom*

*How used*

What do you think are the biggest barriers to SMs complying with referrals?

What would be most effective in reducing or eliminating those barriers?

**Interview Close**

At your installation, what are the biggest strengths regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this strength specific to your installation or does it generalize to other installations?

At your installation, what are the biggest weaknesses regarding the PDHRA?

*Prompts:*

*Support*

*Guidance*

*Integration with other health care and/or assessments (PHA, PDHA)*

*Access to health care*

*Military readiness*

Is this weakness specific to your installation or does it generalize to other installations?

What would be the most effective in reducing or eliminating those weaknesses?

Is there anything that could change in the PDHRA process to make your time better spent?

Any questions or issues that you think are important but we have not talked about so far?

## **Appendix DD: Site Visit Observation Record**

DoD Project Final Report: Contract # W81XWH-07-P-1026

*Site Visit Observation Record*

**General Procedures and flow**

Observer\_\_\_\_\_ Date (of form completion)\_\_\_\_\_

Time (of form completion)\_\_\_\_\_ Location (be specific)\_\_\_\_\_

<p>1. Location where event was held</p> <p><input type="checkbox"/> Military <input type="checkbox"/> Non-military</p>	<p>2. Venue</p> <p><input type="checkbox"/> Hospital/clinic <input type="checkbox"/> Hotel</p> <p><input type="checkbox"/> Gym <input type="checkbox"/> Dining Hall</p> <p><input type="checkbox"/> Other (describe) _____</p>
<p>3. Was there plenty of space for everyone? (how do you know?)</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>4. Describe how Service Members completed the process</p> <p><input type="checkbox"/> with their unit How large_____</p> <p><input type="checkbox"/> as individuals</p> <p><input type="checkbox"/> Other_____</p>
<p>5. Did SMs complete self-report portion of DD Form 2900 on site?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>6. How did they complete the form?</p> <p><input type="checkbox"/> on a hand-held tablet</p> <p><input type="checkbox"/> On a computer</p>
<p>7. Were screens blocked from others' view?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>8. Was there a checklist to guide SMs through processing?</p> <p><input type="checkbox"/> Yes collect sample as possible</p> <p><input type="checkbox"/> No</p>
<p>9. Was the PDHRA integrated with other activities?</p> <p><input type="checkbox"/> Yes if yes, please describe</p> <p><input type="checkbox"/> No</p>	<p>10. The screening process is efficient and minimizes SM wait time (from BHA site certification check list)</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>11. If there was wait time, what did SMs do during this time?</p> <p><input type="checkbox"/> wait in line</p> <p><input type="checkbox"/> paper work/reading</p> <p><input type="checkbox"/> Other _____</p>	<p>12. The site seemed comfortable and conducive to the PDHRA event (from BHA site certification checklist)</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

**Site Visit Observation Record**  
**Educational resources**

Observer\_\_\_\_\_ Date (of form completion)\_\_\_\_\_

Time (of form completion)\_\_\_\_\_ Location (be specific)\_\_\_\_\_

<p>Were PDHRA educational materials such as pamphlets, brochure, and posters available for soldiers and Commanders? (from BHA site certification checklist)</p> <p><input type="checkbox"/> Yes Collect samples as possible</p> <p><input type="checkbox"/> No</p>	<p>Was there incentive to take these materials and look at them (giveaways)?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>Did the SMs use this as a resource?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>When were education resources provided?</p> <p><input type="checkbox"/> before the process began</p> <p><input type="checkbox"/> before the clinician interview</p> <p><input type="checkbox"/> after the clinician interview</p> <p><input type="checkbox"/> other_____</p>

## DoD Project Final Report: Contract # W81XWH-07-P-1026

## Site Visit Observation Record

## Clinician Screening

Observer \_\_\_\_\_ Date (of form completion) \_\_\_\_\_

Time (of form completion) \_\_\_\_\_ Location (be specific) \_\_\_\_\_

How many clinicians were available for PDHRA screening (note point in time)? _____	Was there significant (< 10 min) wait time for clinician interviews? <input type="checkbox"/> Yes How long? _____ <input type="checkbox"/> No
Was the screening area private? <input type="checkbox"/> Yes <input type="checkbox"/> No	Was the screening area: <input type="checkbox"/> cubicles <input type="checkbox"/> room with closed door <input type="checkbox"/> other _____
The clinicians seemed organized and supportive <input type="checkbox"/> yes <input type="checkbox"/> No	The clinicians had adequate time to deal with all SMs appropriately <input type="checkbox"/> Yes <input type="checkbox"/> No

If possible, observe area for at least 30 minutes and note time SMs enter and leave each provider room (i.e., how long is each interview?)

SM	PROVIDER 1		PROVIDER 2		PROVIDER 3		PROVIDER 4		PROVIDER 5	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										

**Site Visit Observation Record**  
**Event pre-briefing**

Observer\_\_\_\_\_ Date (of form completion)\_\_\_\_\_

Time (of form completion)\_\_\_\_\_ Location (be specific)\_\_\_\_\_

<p>Was there a briefing prior to the PDHRA?</p> <p><input type="checkbox"/> Yes (continue below)</p> <p><input type="checkbox"/> No</p> <p>How long was the briefing?_____</p>	<p>Who gave the briefing?</p> <p><input type="checkbox"/> Unit leader (rank_____)</p> <p><input type="checkbox"/> Chaplain</p> <p><input type="checkbox"/> Medical personnel</p> <p><input type="checkbox"/> LHI representative (R/NG only)</p> <p><input type="checkbox"/> Other _____</p>
<p>SM response to briefing</p> <p><input type="checkbox"/> positive    <input type="checkbox"/> negative    <input type="checkbox"/> neutral</p>	<p>Content of briefing</p> <p><input type="checkbox"/> Shared personal experiences</p> <p><input type="checkbox"/> Described activities for the day</p> <p><input type="checkbox"/> specifically mentioned PDHRA</p> <p><input type="checkbox"/> advocated openness on PDHRA</p> <p><input type="checkbox"/> emphasized importance of PDHRA</p> <p><input type="checkbox"/> explained PDHRA process</p> <p>                    <input type="checkbox"/> self report                      <input type="checkbox"/> clinician interview</p> <p>                    <input type="checkbox"/> referrals</p> <p><input type="checkbox"/> Other_____</p>
<p>Were there any audiovisuals used?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>SMs response to audiovisuals?</p> <p><input type="checkbox"/> positive    <input type="checkbox"/> negative    <input type="checkbox"/> neutral</p>	<p>Content of audiovisual</p> <p><input type="checkbox"/> specifically mentioned PDHRA</p> <p><input type="checkbox"/> advocated openness on PDHRA</p> <p><input type="checkbox"/> emphasized importance of PDHRA</p> <p><input type="checkbox"/> explained PDHRA process</p> <p>                    <input type="checkbox"/> self report                      <input type="checkbox"/> clinician interview</p> <p>                    <input type="checkbox"/> referrals</p> <p><input type="checkbox"/> described common post-deployment symptoms and concerns</p> <p><input type="checkbox"/> Other_____</p>

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Site Visit Observation Record

Behavioral Health

Observer\_\_\_\_\_ Date (of form completion)\_\_\_\_\_

Time (of form completion)\_\_\_\_\_ Location (be specific)\_\_\_\_\_

<p>Was there a behavioral health screening included in the PDHRA event?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>If yes, was the screening required for everyone?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>Were behavioral health consultants available on site, even if they did not conduct interviews with SMs</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Other than interviews, how did behavioral health consultants interact with SMs?</p> <p><input type="checkbox"/> not at all</p> <p><input type="checkbox"/> individually</p> <p><input type="checkbox"/> as a group</p> <p><input type="checkbox"/> with SMs in need of immediate assistance</p> <p><input type="checkbox"/> other_____</p>
<p>Was a chaplain available on site?</p> <p><input type="checkbox"/> Yes if yes, please continue below</p> <p><input type="checkbox"/> No</p> <p>Were they utilized?</p> <p><input type="checkbox"/> yes</p> <p><input type="checkbox"/> no</p>	

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Site Visit Observation Record

Additional Personnel

Observer \_\_\_\_\_ Date (of form completion) \_\_\_\_\_

Time (of form completion) \_\_\_\_\_ Location (be specific) \_\_\_\_\_

<p>Was a case manager available on site?</p> <p><input type="checkbox"/> Yes if yes, please continue below</p> <p><input type="checkbox"/> No</p>	<p>How did the case manager interact with SMs?</p> <p><input type="checkbox"/> individually</p> <p><input type="checkbox"/> as a group</p> <p><input type="checkbox"/> with SMs in need of scheduling assistance</p> <p><input type="checkbox"/> other _____</p>
<p>Were there other individuals on site?</p> <p><input type="checkbox"/> Yes if yes, please continue below</p> <p><input type="checkbox"/> No</p>	<p>If yes, who?</p> <p><input type="checkbox"/> medical personnel</p> <p><input type="checkbox"/> administrative personnel</p> <p><input type="checkbox"/> other _____</p> <p>What was their role?</p>
<p>Did any of the above individuals, or anyone else, facilitate scheduling referrals resulting from the PDHRA?</p> <p><input type="checkbox"/> Yes if yes, continue below</p> <p><input type="checkbox"/> No</p> <p>Who? _____</p>	<p>How?</p> <p><input type="checkbox"/> scheduling referrals</p> <p><input type="checkbox"/> discussing referral options</p> <p><input type="checkbox"/> signing SMs up for VA benefits</p> <p><input type="checkbox"/> educating SMs about resources available</p> <p><input type="checkbox"/> Other _____</p>

**Site Visit Observation Record  
Vanderbilt Study Procedures**

Observer\_\_\_\_\_ Date (of form completion)\_\_\_\_\_

Time (of form completion)\_\_\_\_\_ Location (be specific)\_\_\_\_\_

<p>Was the Vanderbilt study on the agenda/processing check list?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Did all SMs hear the Vanderbilt briefing describing the study?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No (please describe who missed it and circumstances)</p>
<p>Was it clear to the SMs what the study was about and when to participate?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Was the Vanderbilt survey in a convenient location?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>Was the Vanderbilt area easily visible from the rest of the processing area?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>Did SMs participating in the SM Qx complete the questionnaire after the PDHRA process?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No (if no, why not, and when did they complete it?)</p> <p><input type="checkbox"/> before the self-report</p> <p><input type="checkbox"/> after self report, before clinician interview</p> <p><input type="checkbox"/> other_____</p>
<p>What, if any, questions did SMs ask about the study?</p>	<p>Was there adequate space for all willing participants to complete the survey without waiting?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>Were there any problems in administering the SM Qx?</p>	<p>Was there any noticeable reaction to the SM Qx?</p>

## **Appendix EE: Unit Leader Codebook**

## Unit Leader Interview Codebook

1. Copy entire exchanges between interviewer and respondent on a given topic/theme (err on the side of more rather than less text)
2. Single quotes or sections MAY be coded into more than one node
3. Code for each question/theme, AND carefully review codebook for additional nodes that may be appropriate
4. Carefully consider and stick close to each definition/explanation of the code. When in doubt, consider whether or not a report statement made about that node would be accurately represented by the quote in question (e.g. “40% of unit leaders reported that SMs in their command believe the PDHRA increases their health”—is that what the respondent said/meant by a particular quote?)
5. Be aware that sometimes respondents do not differentiate among PDHA, PDHRA, and other assessments SMs complete. For example, if they refer to “the pre-deployment one” or “the one they did in theater” they are not talking about the PDHRA.
6. “Leading Questions” in which the interviewer provides the key information instead of the respondent are UNCODABLE.
7. Create FREE NODES for data that represent emerging themes

A1) Access-Identify: How do you typically identify SMs who are having problems? SMs with physical or mental health problems are typically identified by . . .

**NOTE: If Commander knows how Unit Leaders make identifications (e.g. behavior), but only knows him/herself by CoC, CODE BOTH**

Node	Definition/Explanation
Self (bx, cm)	<ul style="list-style-type: none"> <li>• Service member directly communicates that s/he is having a problem;</li> <li>• NCO or OFF observes SM behavior, appearance, work habits, etc. change to indicate a problem;</li> <li>• An SM is involved in a specific incident e.g. fight or DUI that indicates a problem</li> </ul>
CoC-Comm	The chain of command is used to alert OFF or NCOs that a SM is having a problem
Oth-Comm	Someone from outside the chain of command e.g. family, friends, other SMs notify the OFF or NCO of a problem with a SM
Mechanism	There is a formal process or protocol in place by which OFF or NCO may be made aware of SM problems (e.g. PDHRA; morning role call)

<b>A2) Access PDHRA: Has the PDHRA influenced your ability to make those identifications?</b>	
Node	Definition/Explanation
No Influence (exclusive)	PDHRA is not a factor in OFF or NCO ability to identify problems
Help	PDHRA is a positive influence on the OFF or NCO's ability to identify SMs with problems
Hinder	PDHRA is a negative influence on the OFF or NCO's ability to identify SMs with problems
<b>A3) Milred PDHRA Influence: Has the PDHRA influenced the military readiness of your unit? If so, how?</b>	
<b>Focus here is on PDHRA's influence on SMs' health; not necessarily the military definition of readiness.</b>	
Node	Definition/Explanation
No (exclusive)	PDHRA has no influence on military readiness
Yes-Pos SM	PDHRA increases the commander's ability to assess and know about troops' health and readiness to deploy (Focus on the commander: PDHRA helps the commander know what he or she needs to know about troops' health in order to ensure readiness); PDHRA helps commanders know what services troops need; NOT ADMINISTRATIVE/PAPERWORK
	PDHRA increases troops' access to care, contributes to their healthiness, which improves readiness to deploy (Focus on troops' health and the PDHRA has an influence on it)
	PDHRA helps NCOs/OFFs complete administrative tasks/paperwork necessary for deployment; influences readiness in an unanticipated, positive way
Yes-Negative	Record any negative influences the PDHRA process has on military readiness e.g. PDHRA's influence leads to (1) healthy SMs NOT deploying or disqualified from regular duties and/or (2) unhealthy SMs deploying or working regular duties

<b>A4) Milred PDHRA Time: Does the PDHRA affect SM time away from duties?</b>	
Node	Definition/Explanation
No (exclusive)	PDHRA does not affect SM time away from duties; or the PDHRA and associated activities are considered duties and therefore do not “take time away from duties”
Yes-Comp	Completing the PDHRA forms and interviews affects SM time for duties
Yes-Apppt/Refer	Attending follow-up appointments or treatment associated with PDHRA referrals affects SM time for duties
<b>A5) Disclosure-SM Perception: What do you hear, if anything, about SM perceptions of the PDHRA?</b>	
Node	Definition/Explanation
Positive	Respondent hears generally positive SM perceptions of PDHRA; perceives that SMs generally feel the PDHRA has a positive influence on their health
Negative	Respondent hears generally negative SM perceptions of PDHRA; they complain about the time it takes, worry about confidentiality, or in some way “mistrust” the system
Ambivalent	Respondent indicates that SM response is neither positive nor negative. SMs complete the PDHRA because they have to do it, and show/express few feelings one way or another about the process.
DK/Don’t hear	Respondent doesn’t know what SM perceptions of the PDHRA process are
<b>A6): Process Challenge: What are the biggest challenges you face in getting SMs to complete the PDHRA process? How do you overcome them?</b>	
Node	Definition/Explanation
None (exclusive)	NCO or OFF does not experience any challenges in getting SMs to complete PDHRA process
SM	The SMs themselves do not or delay for any reason completing the PDHRA process which includes following upon referrals or

Resources/Logistics/Time	treatment NCOs or OFFs have to deal with inadequate space (s), too few computers, too few personnel to facilitate the process, scheduling problems—that may increase the amount of time needed to complete the process; time may be a challenge for other reasons than logistics as well
Other barriers	Respondent lists unanticipated barriers to completion; or respondent acknowledges that there are challenges but does not give specific instances or details
<b>B1) Process-Eligible: How do you know when SMs in your unit become eligible for PDHRA?</b>	
Node	Definition/Explanation
NA/DK	NCO or OFF does not know when SMs are eligible or it is not his or her responsibility to know. NCO or OFF doesn't distinguish the PDHRA from PDHA or PHA, or has the timing of the assessments confused.
Formal Mech-Other	There is an established process by which the NCO or OFF is alerted by someone else like a subordinate officer or physician's assistant when SMs are eligible; or there is some other established process or protocol by which they become aware
Formal Mech-Self	There is a process or protocol by which the NCO or OFF checks SM records him- or herself to determine when SMs are eligible
<b>B2) Process Compliance: Are you involved in ensuring SM compliance with completing the PDHRA process? If yes, describe.</b>	
Node	Definition/Explanation
No (exclusive)	NCO or OFF is not involved directly (personally) or indirectly (s/he is responsible for a subordinate who is directly responsible)
Yes-Show Up (exclusive)	The NCO or OFF acknowledges some type of responsibility for ensuring SMs complete the process. This may be in the form of an order to a subordinate.
<b>B3) Train-Intro: Are you involved in providing any kind of introduction for the PDHRA to unit members? If yes, describe.</b>	
Node	Definition/Explanation

No (exclusive)	Commander is not involved in any training, explanation, introduction or other formal/official contact with SMs prior to process
Yes (exclusive)	Commander is involved in any training, explanation, introduction or other formal/official contact with SMs prior to process

**B4) Process RecInfoWhat: Do you receive any information on your unit members after they have completed the PDHRA? If yes, what information do you receive? If yes, how do you use that information?**

Node	Definition/Explanation
No (exclusive)	NCO or OFF does not receive any information after SMs complete PDHRA
Yes—Self Report-Direct	NCO or OFF receives information about the Self Report section of the PDHRA via formal mechanism that does not include the SM e.g. report from medical personnel regarding specific items on the PDHRA
Yes-Ref	NCO or OFF is (made) aware via formal mechanism of a referral if one is made
Indirect	NCO or OFF becomes aware of the outcome of an SM's PDHRA process by means other than a formal mechanism e.g. through an informal source or process such as being told by the SM or knowing when an SM is not at his or her regular duty
Yes-How	NCO or OFF details the ways s/he uses the information about an SMs PDHRA

**B5) Support Lead Open: What could unit leadership do to increase SM openness on the PDHRA about problems they might be having?**

**\*SEE ALSO D4:YES**

**This section refers mostly to personal interactions NCOs or OFFs may have with SMs**

Node	Definition/Explanation
Lead Inc Open: Chunk all responses into this node	NCO or OFF does not know what could be done or doesn't believe anything could be done
	NCO or OFF believes more Formal SM education on the process would increase openness
	NCO or OFF believes more encouragement

	to be open from commanders during the process would increase openness
	NCO or OFF believes altering the schedule in some way would influence openness
	NCO or OFF has had opportunity to implement some means to attempt to increase openness on the PDHRA
	Ensure SM confidentiality throughout the process; take additional measures to assure SMs that responses are confidential
	There's nothing that commanders can do because the SMs are going to be as open or not as they choose to be
<b>B6a) Disclos – Policy: Last summer DoD policy changed so that military personnel are no longer required to disclose any service-related treatment that they have received when they apply for security clearance. Were you aware of this?</b>	
<b>Node</b>	<b>Definition/Explanation</b>
Know (exclusive)	NCO or OFF did know about policy change
Don't Know (exclusive)	NCO or OFF did not know about policy change
<b>B6b) Is this communicated to SMs?</b>	
<b>Node</b>	<b>Definition/Explanation</b>
Yes-Comm	The new policy was communicated to SMs, or the NCO or OFF affirms that SMs know about the policy change
No-Comm	The new policy has not been communicated to SMs, or the NCO or OFF does not believe SMs know of the policy change
<b>(B6b2) How, if at all, do you think this will influence how SMs report problems or concerns on the PDHRA (both self-report and clinician assessment)?</b>	
<b>Node</b>	<b>Definition/Explanation</b>
Yes-Infl (mutually exclusive w/ No)	NCO or OFF believes the policy change will influence how SMs report problems or concerns on the PDHRA
No-Infl (mutually exclusive w/ Yes)	NCO or OFF does not believe the policy change will influence how SMs report problems or concerns on the PDHRA

<b>(B6b3) Will this be different for officers versus enlisted SMs?</b>	
<b>Node</b>	<b>Definition/Explanation</b>
Yes-InfDiffOFF	Respondent believes the policy change will influence officers and SMs differently in how they report problems or concerns on the PDHRA
No-InfDiffOFF	Respondent believes the policy change will not influence officers and SMs differently in how they report problems or concerns on the PDHRA
<b>B7) Support-LeadShare: Have you, as a leader, ever shared your personal experience with service-related mental health problems or treatment, as a way of encouraging help-seeking in your unit SMs?</b>	
<b>Node</b>	<b>Definition/Explanation</b>
No Opportunity (mutually exclusive w/ "Haven't" and "Have")	NCO or OFF has not had a service-related mental health problem OR has had a problem but not had an opportunity to share it as a way of encouraging help seeking among SMs
Haven't	NCO or OFF has had an opportunity, but has not shared a personal experience with service-related mental health problems to encourage help seeking among SMs
Have	NCO or OFF has shared a personal experience with service-related mental health problems to encourage help seeking among SMs
Would	NCO or OFF responded that if s/he were presented with the opportunity to share a personal experience with mental health problems to encourage a SM to seek help s/he would do so
Wouldn't	NCO or OFF responded that if s/he were presented with the opportunity to share a personal experience with mental health problems to encourage a SM to seek help s/he would NOT do so
Example	NCO or OFF responded with a specific example of instance(s) in which a personal mental health problem was shared with SM(s)
<b>C3) Support-OffLevel: What is the general level of support for the PDHRA among other officers and NCOs?</b>	

Node	Definition/Explanation
DK (exclusive)	Respondent does not know what the general level of support among other officers or NCOs is; or is unwilling to speak for other officers or NCOs
None (exclusive)	Respondent believes that the PDHRA receives no support among other officers or NCOs
Support	Respondent believes that the PDHRA is generally supported by other officers and NCOs because they support its overall goal; they think it's a beneficial program; not just support for compliance's sake
Comply	Respondent believes that other officers and NCOs support the PDHRA because they must comply with the order to have SMs complete the process
Varies	Respondent believes that the PDHRA is both supported and not supported by different individuals or groups of other officers and NCOs; and/or specific parts or aspects of the PDHRA process are supported or not supported

**D1) Access-ElseHelp: What else could be done to identify SMs in need of help who are not already under care?**

Node	Definition/Explanation
Elst Identify SMs:  Chunk all responses into this node	Respondent believes that taking measures to reduce stigma associate with service-related mental health problems could help identify SMs in need of help
	Respondent believes the current formal processes in place could be changed or that new formal processes could be put in place to help identify SMs in need of help
	Respondent gives an unanticipated answer or suggestion for improving abilities to identify SMs in need of help not related to reducing stigma or formal processes
	Respondent believes there is nothing that could be done to improve abilities to identify SMs in need of help

**D4) Process-Change: Is there anything that could change in the PDHRA process to make your time better spent?**

Node	Definition/Explanation
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Process Change:	Respondent states that no changes are necessary; there is no way to make the process a better use of time; or doesn't know what could be done
Chunk all responses into this node	Respondent makes specific suggestions or shares ideas for improvements or areas of the process that could be improved
<b>D5)OtherImpIssue: Any questions or issues that you think are important but we have not talked about so far?</b>	
Node	Definition/Explanation
Oth Important:	No other issues brought up or discussed
Chunk all responses into this node	Other issues or questions are brought up or discussed by NCO or OFF
<b>Party Line</b>	
Node	Definition Explanation
Yes (exclusive)	Coder's assessment of the veracity of the respondent's statements. It is your belief that the NCO or OFF has not been honest and forthright and that his or her answers may have been influenced by another party.
No (exclusive)	Coder's assessment of the veracity of the respondent's statements. It is your belief that the NCO or OFF has been honest and forthright and that his or her answers have not been influenced by another party
Unicode	Response either follows a leading question or prompt by the interviewer in which the respondent's words alone do not warrant inclusion in an existing code, or a response, on its own, does not fit an existing code; takes the place of "other" as a code.
PDHRA Benefits	Respondents state the positive aspects of the PDHRA process (Might also be interpreted as "strengths" of the PDHRA process—a question that some of the U.L.s were asked but not all)
PDHRA Drawbacks	Weaknesses of the PDHRA program; specific aspects of the process that U.L.s find problematic or troublesome.

Free Nodes: Free nodes have been added to the NVivo project during the coding process for Unit Leader interviews. They represent emergent themes, recurring issues, or

interesting topics that are not captured in the Tree Nodes (main codebook) coding scheme. These are not “true codes” in that they do not reflect data from every interview. They are created “on the fly” while coding, so any themes that we wish to follow up on must be recoded in each interview transcript.

<b>Free Node</b>	<b>Description</b>
Air Force Specifics	Some questions were asked only to Air Force unit leaders to address the known differences in the PDHRA process from other branches e.g. only requiring clinical interviews for SMs who "red flag" specific items on the survey
Concerns about multiple health screenings	Unit leaders express confusion or concerns about the number of different health screenings SMs are required to do: PHA, PDHA, PDHRA, others. They wonder whether the effect of all the screenings is that SMs get the sense that no one is paying attention to them or the SMs don't take them seriously because they happen often and become "one more thing to do"
Confidentiality issues	Unit leaders suggest that at some level complete confidentiality is impossible in their unit or that SMs may not be willing to fully disclose problems they are having for fear that their information is ultimately not going to be entirely confidential no matter what anyone says
Diff Mental and Physical	Respondent indicates a difference in attitude toward or treatment of mental or behavioral problems or referrals vs physical health issues for SMs in the PDHRA process
Mental illness stigma	General expressions of stigma around issues of mental health, talking about it, sharing it with SMs, reporting it, etc. Suggestions that a mental health problem is connected to or can be interpreted as a weakness by the SM or his/her leaders, peers, or subordinates.
Parking Lot-Quotables	Speeches NCOs or OFFS make that don't really fit anywhere else, but may be quotable. . . Unit Leaders expressing various interpretations, impressions of where the policy comes from, why it's in place, who it serves, etc.

Privacy vs. Need to Know	Tensions exist between a SMs privacy in health related matters and the unit leaders need to know the status of the SMs with regard to their deployability and abilities to perform their specific duties. Where is the line between privacy and knowing that troops are healthy and ready to go.
Reserve particulars	Particular issues that come up only at Reserve installations that make them different from active duty bases.
SM Honesty_Openness	NCO or OFF judgment of whether or not SMs are honest on their PDHRA
SM Use of PDHRA	Respondent explains his or her perception of how and why SMs complete the PDHRA process in a particular way e.g. to get home faster, to make sure they are covered in the future, to avoid deployment, to be deployable, etc.
Time in Service Matters	Perception that there is a difference between how older and younger SMs respond to the PDHRA process; or perception that there is a difference between how higher ranking SMs vs. lower ranking SMs perceive or use the PDHRA process